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RAYON

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Textile World

Formerly *Textile World Journal* with which are combined *Textiles, Posselt's Textile Journal* and *Textile Advance News.* Published Weekly, United States and possessions, $4 per year; Canada (including Canadian duty), $6.50; Mexico, $4.00; Central and South America and Pan-American Union, $6; other foreign countries, $8 U. S. currency, or 40 shillings. Single copy, 20 cents, excepting special issues.

Member A.B.P. *Member A.B.C.*

Textile World

ESTABLISHED 1868

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Semi-annual Index is sent to subscribers on request. TEXTILE WORLD is also indexed in the Industrial Arts Index to be found in public libraries.

BRAGDON, LORD & NAGLE CO., INC.

Division of McGraw-Hill Publishing Co., Inc., 330 West 42d St., New York

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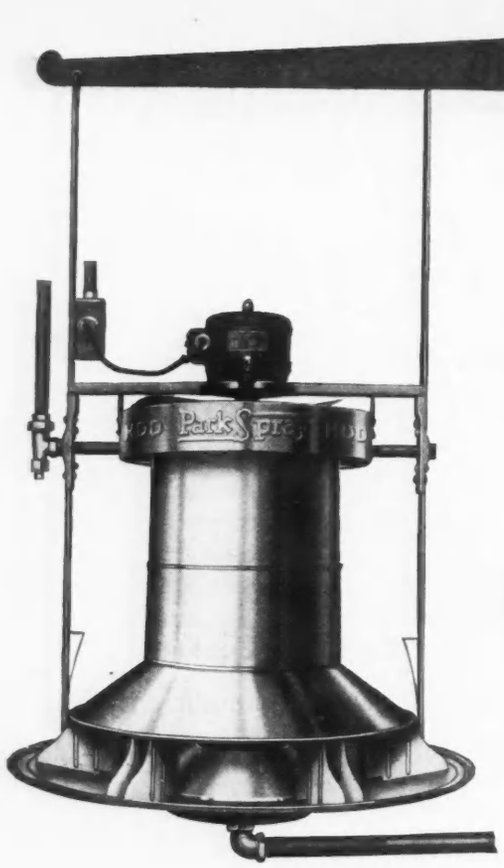

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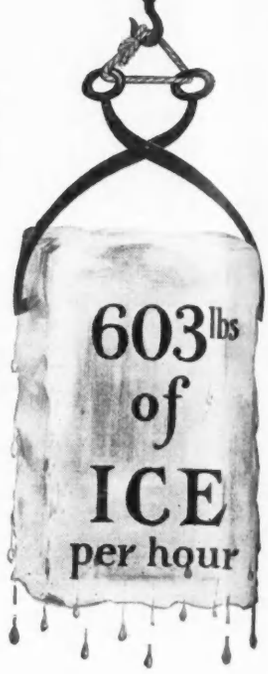

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ADEQUATE HUMIDITY — ACCURATELY CONTROLLED

March 12, 1932

Textile World

Vol. LXXXI, No. 11

Published every Saturday by Bragdon, Lord & Nagle Company
Division of McGraw-Hill Publishing Company, Inc., New York

Editor: Douglas G. Woolf

Maybe Textiles Aren't Different

"WHAT? Jewelry stores selling typewriters? Yes—sterling silver typewriters, now manufactured for graduation gifts."

This little item, published recently in Textile World under the heading "But of Course Textiles Are Different . . . " started at least one man thinking. And the result of his thought, as expressed in a letter to the editor, was that a good many textile companies have gone into diversified manufacturing or selling, the story of which might seem equally as spectacular as the sterling silver typewriter incident.

▼

A great deal has been written, justifiably, about the pioneering efforts of Callaway Mills in advancing fabrication of their products to such lines as rugs, men's trousers, canvas trucks, laundry textiles, wiping cloths, etc. Similarly, the news that Goodall Worsted Co. planned to manufacture Palm Beach garments as well as the fabric was hailed as another important instance of diversification.

Significant as were these two cases, it is probably equally encouraging to note that examples of this trend in textiles are multiplying.

A fabric company is now making sheets, pillow-cases, diapers, bloomers, handkerchiefs, etc. Another has arranged for the manufacture of a line of men's shirts carrying the mill name on the garments. A novelty yarn producer, finding the market for tinsel yarns unsatisfactory, started to fabricate pot scourers and other products from tinsel, selling them to chain stores and large department stores. A 98-year old concern, described recently in these columns, found in brake linings, garters, and other products, outlets for its narrow fabric.

The correspondent mentioned above tells us of an underwear company which had from time to time sold clippings to a woman who used them for making rag dolls to be sold at charity bazaars. The underwear concern found that sales to her were increasing and, with her permission and help, started into the business of making these dolls. Now the plant is exclusively a doll factory. The development was described in a magazine article under the apt caption, "The Tail Wags the Dog."

Again, a company which formerly made carpets and rugs only, is now producing women's dress goods, men's suitings, rayon fabrics, rattan furniture—and is even conducting a realty company.

▼

The latter, of course, suggests a word of caution. It does not necessarily follow that all other lines offer greater opportunity than the one which a particular company happens to manufacture. Quitting one and adding to over-production of others is hardly a constructive answer.

But, departure from stagnant markets and entrance into new fields, *after careful study of the markets involved,* may represent the difference between failure and success.

We are accumulating facts regarding instances such as those mentioned above. Additions to this collection, from readers, will be welcome. We believe the story back of it is an inspiring one.

Who knows—maybe textiles aren't different?

The Week in Textiles

as Reflected in This Issue

General

Textile Test Methods

Details of proposed methods for testing textile materials purchased by the various departments and establishments of the United States Government are outlined. *(page 22)*

Garment Trade's Problems

Proposed sales tax, returned goods, convict labor competition, and unfair trade practices are the chief problems of the garment industry, according to addresses at the annual meeting of the International Association of Garment Manufacturers in Chicago. *(page 27)*

Textiles at British Fair

Developments in dyeing, bleaching and finishing lend particular significance to fabrics shown in the Textile Section of the British Industries Fair. *(page 29)*

Eliminating Falls

Elimination of falls is a large factor in any accident prevention program. Particularly is this true of textile mills, where wet floors and poorly designed staircases are constant hazards to the workers. *(page 29)*

Progress at Auburn

Real progress has been made in the growth of the School of Textile Engineering of Alabama Polytechnic Institute, Auburn, Ala. *(page 30)*

Portable Humidifier

For office and residence use a portable humidifier of attractive design has been developed. Its method of operation is clearly explained. *(page 45)*

Rotary Sewing Machines

Three new rotary sewing machines of the butted-seam type are described. Both motor-driven and foot-driven models are available. *(page 45)*

Cotton

Spinning and Warping Discussed

The effects of various twists, humidities, and speeds in cotton spinning and warping were discussed in an interesting manner by overseers. Among other things, sloughing of yarn from bobbins, long drafting, spinner patrols and end breakage were given consideration. Of particular interest was the description of a new warping system permitting a speed of 900 yards per minute. *(page 33)*

Cotton for the Rayon Industry

Further progress in the growing of cotton for its cellulose content is noted. The entire cotton plant, with the exception of the roots, is used in the chemical processes. *(page 25)*

Clearer Board Napper

Announcement is made of the development of an improved machine for napping top clearer boards. In addition to renewing the nap on the felt and prolonging its serviceable life, it also performs the service of cleaning the boards. *(page 44)*

Cotton More Stable

Cotton has become more stable after a period of reaction and uncertainty. The rise of sterling exchange helped; also the fact that the market weathered so long a period without extreme setback has discouraged bears. *(page 51)*

Mercerized Yarns Advanced

An advance in mercerized cotton yarns to a basis of 55c. for 60s-2 has proved generally encouraging to the whole yarn market. *(page 51)*

Cottons Dull but Steady

Cotton goods hold firm through a period of continuing dullness. Market observers state that such a lack of business as lately experienced would have broken prices wide open last fall. Now thanks to regulated production and the spread of a new gospel the market remains steady. *(page 53)*

Wool

Shrinkage of Stock Affects Handle

An explanation is given of the difference in character of the fabric obtained when dyeing in the piece rather than in the yarn. *(page 47)*

No "Push" to Yarns

Worsted yarns lack impetus this week to produce any change. Buyers are refusing to operate ahead and orders are so small and scattered that price basis is nominal. *(page 51)*

Wools Resist Pressure

Reports from Boston indicate that pressure for lower wool prices has proved ineffectual in weakening the

The Textile Outlook

ABILITY to withstand pressure for lower prices has become the cardinal virtue of any truly virtuous branch of the textile market. It has taken two years for merchants to accept as true the paradox that buyers urge lower prices as prerequisite to ordering and then boycott the market that yields to them. That many branches of the textile markets are learning wisdom through experience is evident in the number of lines which lately are reported steady though extremely dull. The whole range of cotton and its manufactures seems to have cultivated this resistance to a marked degree. Raw wool shows it. Knit goods' firmness is an additional reason for their fair support. Silk shows the reverse—all time lows and scant support. Many economists argue that merchandise weakens in price because it is neglected by buyers. Recent experience in the market seems to argue for a reversal of this: that merchandise becomes neglected because it has shown weakness. There is something in the latter statement of the causal relationship. Certainly a stable market is more encouraging than a weak one and textiles are learning how to hold stability under most disconcerting circumstances.

market. From other sources come reports to the effect that sales are being made on a lower basis than a few weeks back. *(page 52)*

Easter Helps Fabrics

Approach of Easter has stimulated demand for men's worsted suitings, and mills report good spot call, with tendency toward fancies. *(page 53)*

Knitting

Stop Motions

Spring-needle machines of the leaded-cylinder type are equipped with stop motions for the cloth but not for the yarn. An electric stop motion to prevent the entrance of a loose or broken end into the machine has been marketed, but it has not met with wide favor. *(page 46)*

Defect in Astrakan

In order that astrakan yarn may loop through onto the surface of the fabric it is necessary that the loops must come opposite an open space in the cloth. This is not practical and really consists in trying to make a defect appear regularly. *(page 46)*

Sewn Mesh Hosiery Active

Sewn mesh hosiery retailing at $1.25 sells steadily and prices are firm; competition has slackened. *(page 54)*

Branded Underwear Preferred

Fall underwear response so far has centered on quality lines, and there is particular interest in branded merchandise. *(page 54)*

Swimsuits Improve

Increased demand for high-priced and low-priced swimsuits, with intermediates slow, is shown in knitting mill sales reports. *(page 54)*

The Price Advance in Mercerized Yarns

ANOTHER indication that the textile industry is getting a little bored with the business of producing losses is reflected in the price advance of approximately 5c. per lb. made this week in mercerized yarns. Most of the scattering attempts made thus far to inject stability into markets and to achieve an opportunity to at least break even, have been in the finished fabrics. The spread of this movement to intermediate products, even if to only a relatively small division of the trade, is decidedly encouraging. It may not be followed immediately by allied producers, such as carded and combed yarn spinners, but at least it is a step in the right direction. Certainly, it appears that, instead of scaring buyers away, this price advance has injected more confidence into the market. This has been the experience of manufacturers in other lines following advance of prices to approach a profitable level.

In this direction lies the "way out"—not only for producers, but for distributors and consumers.—*Editor.*

Silk

Commission Weaver Speaks

Lack of firmness in prices, unfair methods by buyers and the need of a trade alliance, are emphasized in caustic review of the commission weaver's problems by a weaver. *(page 38)*

Improved Coning Machine

Announcement is made of the development of a new and improved coning machine which may be equipped for either silk throwsters or rayon manufacturers. Operating details and outstanding features of the machine are described. *(page 44)*

Ribbon Sucess an Object Lesson

Profitable operations in the ribbon industry during 1931 make that branch of textiles worth study by other less fortunate manufacturers, says this week's TEXTILE WORLD Analyst. The secret of the ribbon mills success seems to be the recognition of the imprudence of trying to force sales and the value of balanced production. *(page 49)*

Silk Hits New Low

Silk prices hit a new low of $1.45 on the Exchange, and hosiery manufacturers complain that quality of shipments has deteriorated. *(pages 52)*

Strike Hits Broadsilks

A drop of 50% in broadsilk sales to cutters-up is reported by some weavers. Printed flat crepes stronger. *(page 53)*

Rayon

New Styles Highlight Rayon

Rayon fabrics, particularly in mesh and lace effects, are an outstanding division of woven textiles this season, due to significant laboratory developments among manufacturers of synthetic yarns. *(page 26)*

Rayon Interests Paris

Parisian fabric houses, such as Bianchini, Rodier, Meyer, etc., in their presentations so far this year have stressed rayon and rayon containing mixtures. *(page 39)*

Curtailment Helpful

Curtailment of rayon output to about 70% of capacity has stimulated market tone and outlook is better. *(page 52)*

The Business Outlook

PSYCHOLOGICAL convalescence from the panic stage of depression continues steadily. The narrow fluctuations and slight uptrend of stock prices and the strong, continuous rise in bonds since early January are encouraging surface symptoms. Steady decline in bank suspensions, unseasonal lessening of outstanding currency, and slight increases in member bank deposits and reserve balances are of more basic significance. Expectations of persistent Federal Reserve pressure continue, but signs of any vigorous seasonal expansion of member bank credit needed to replace depleted purchasing power, improve employment, increase consumption and stimulate business activity are still lacking. In consequence commodity prices show no sustained strength and most industrial and trade indicators at the outset of March are, at best, stagnant and barely holding bottom levels. The liquidity complex in banking policy continues, and the fiscal philosophy exhibited in the sales tax and other features of the new Federal revenue proposals is persistently deflationary, in pointed opposition to other attempts of the Administration to promote expansion.—*The Business Week.*

Processing

One-Bath Method of Dyeing

A single-bath method of dyeing designed to minimize shade variations in silk hosiery is described. *(page 31)*

Tinting Silk Evenly

Possible causes of uneven tinting of silk in the soaking bath are enumerated; and, with some types of soaking machines, it is pointed out that channeling may be the source of trouble. *(page 46)*

Overhauling Extractor Basket

A method of determining when hydro-extractor baskets require overhauling is outlined. *(page 47)*

Federal Specifications Board Proposes

Textile Test Methods

DETAILS of a proposed method for testing textile materials purchased by the various departments and establishments of the United States Government follow. Comments on this specification and suggestions as to changes which may be thought desirable should be sent to the Federal Specifications Board, Washington, D. C., prior to April 30, 1932.

I. *Purpose and scope*—This specification gives the general physical and chemical methods for testing textiles for conformance with the requirements of Federal Specifications. It does not include the special test methods applicable to certain materials which are described in the appropriate specifications, nor does it by any means include all of the textile test methods used in the industry. This specification was prepared in order to eliminate unnecessary or undesirable variations in the general testing procedure.

II. *Atmospheric conditions*—Physical tests may be made under prevailing atmospheric conditions except in the settlement of disputes. Tests shall then be made upon conditioned material; i.e., material which is in equilibrium with an atmosphere having a relative humidity of 65% and a temperature of 70° F. (21° C.). Material shall be considered to be in equilibrium when it shows no progressive change in weight.

III. *Determination of moisture content*—

1. Although the moisture content of textiles usually is not specified in Federal Specifications, government laboratories often are called upon to determine it. The procedure for drying specimens to constant weight which is detailed in the following paragraphs is also applicable in Sections IV and V.

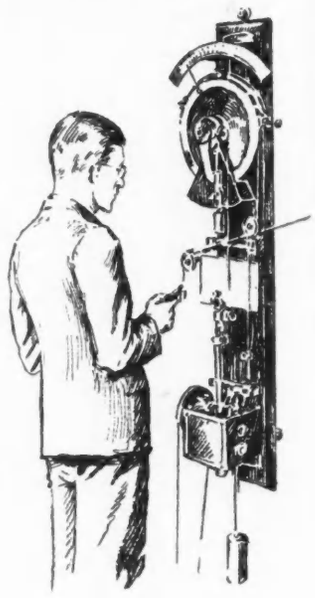
2. Unless otherwise specified, samples for moisture content shall be conditioned as described in Section II and the results based on the weight of the conditioned material.

3. Samples for moisture content "as submitted," shall be representative of the material to be tested and shall by weighed at the time and under the conditions of sampling. They shall be submitted to the laboratory in sealed moisture-proof containers. The samples shall be acceptable for test only if the difference in weight of the unopened container as received by the laboratory and the container after removal of the sample is the reported weight of the sample within ± 0.2%. The results of the analysis shall be based on this weight.

4. A glass weighing bottle of approximately 100-c.c. capacity fitted with a ground glass cover is dried to constant weight in an air oven maintained at 221 to 230° F. (105 to 110° C.). A satisfactory procedure is to place the bottle and cover separately in the oven. After drying for 1 hr. they are transferred to a desiccator and allowed to cool to room temperature. The cover is placed on the bottle which is then weighed. The heating, cooling, and weighing are repeated until the weight is constant to ± 0.003 gram. This is the "weight of weighing bottle." This weighing bottle is kept in a desiccator when not in use.

5. A specimen of approximately 5 grams of the material to be tested is placed in the weighing bottle which is then covered and weighed. This is the "weight of weighing bottle plus specimen." By subtracting the "weight of weighing bottle" (paragraph 4 above) from this weight, the "weight of specimen" is obtained.

6. The specimen is removed from the weighing bottle and placed loosely on a watch glass in the oven (temperature 221 to 230° F. as before). After drying for 1.5 hr., the specimen is quickly transferred to the weighing bottle which is placed uncovered in a desiccator. When the specimen and bottle have cooled to room temperature the cover is replaced on the bottle and it is weighed. The sample is then returned to the oven and the drying, cooling and weighing are repeated until the weight is constant to ± 0.003 gram. This is the "weight of dry specimen and weighing bottle." By subtracting the "weight of weighing bottle" from this weight, the "weight of dry specimen" is obtained.



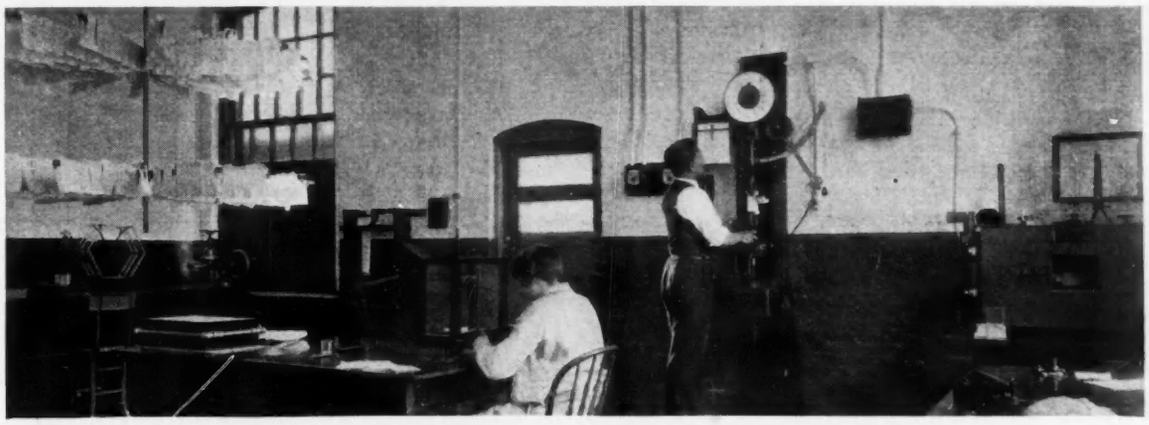
7. The moisture content of the specimen is given by the following calculations:

$$\text{Moisture content of specimen in per cent} = \frac{\text{weight of specimen} - \text{weight of dry specimen}}{\text{weight of specimen}} \times 100$$

IV. *Fiber identification and quantitative determination*—

1. Cotton—No further test is needed for the identification of cotton in cotton textiles than visual or microscopical examination of fibers taken from the specimen. The fibers may be treated with stains or other reagents before examination.

2. Wool—Wool textiles shall contain not more than 1% of fibers other than wool. Adulteration can be shown by microscopical examination of fibers pulled from the specimen. Stains or other reagents applied to the fibers before examination are helpful. The method given in Section 3, below, shall be used in the settlement of disputes as to the amount of vegetable fiber in wool. The "percentage of cotton in the mixture" found according to Section 4d, is taken to be "percentage of vegetable fiber in the mixture" for this purpose.



Physical testing laboratory of Naumkeag Steam Cotton Co., at Peabody, Mass.

3. Mixtures of cotton and wool—(3a) If the cotton and wool are in separate yarns, examine the yarns dissected from the material according to IV-1 and IV-2. The method outlined in the following paragraphs is applicable if a quantitative analysis of the mixture is required. (3b) A specimen of approximately 5 grams is taken for test. It is advisable to cut cloth specimens on the bias in order to avoid fraying and loss of fibers. The specimen is dried to constant weight in an air oven at 221 to 230° F. (105 to 110° C.). See III-6 for method. The "weight of the dry specimen" is recorded. (3c) The specimen is then treated according to Sections V-2 and V-3 in order to remove sizing, finishing, and other non-fibrous materials. The dry weight of the resulting specimen is taken to be the "weight of dry cotton cellulose and wool protein." (3d) Boil the specimen from 3c in a 5% solution of potassium hydroxide in distilled water for 10 min., sufficient solution being taken to cover the specimen at all times (usually about 400 c.c.). Decant or filter the solution and rinse the residue with hot distilled water, then with a 5% solution of acetic acid in distilled water; and finally with water until the rinse water is neutral to blue litmus paper. The residue is dried and its dry weight is taken to be the "weight of dry cotton cellulose" in the specimen. (4d) The results of the analysis are obtained by the following calculations:

$$\text{Percentage of cotton in the mixture} = \frac{1.065C}{1.065C + 1.14(B-C) + (A-B)} \times 100 = \frac{106.5C}{A - 0.14B - 0.075C}$$

$$\text{Percentage of wool in the mixture} = \frac{1.14(B-C)}{1.065C + 1.14(B-C) + (A-B)} \times 100 = \frac{114(B-C)}{A + 0.14B - 0.075C}$$

$$\text{Percentage of non-fibrous constituents in the mixture} = \frac{100(A-B)}{A + 0.14B - 0.075C}$$

In which: A = "weight of the dry specimen" from 3b; B = "weight of dry cotton cellulose and wool protein" from 3c; C = "weight of dry cotton-cellulose" from 3d; $A - B$ = weight of dry non-fibrous constituents; $B - B$ = weight of dry wool protein; 6.5% = moisture regain allowed in converting dry cotton cellulose to cotton; $0.165C$ = weight of cotton in mixture; 14% = moisture regain allowed in converting dry wool protein to wool; and $1.14(B - C)$ = weight of wool in mixture.

Substances associated with the raw fibers which may be removed in normal processing are considered non-fibrous constituents, along with sizing and finishing materials, soil, etc. Moisture associated with non-fibrous constituents is not included in the results.

V. *Determination of total sizing, finishing, and other non-fibrous materials in cotton (and in cotton-wool mixtures)*—

1. A specimen of approximately 5 grams is taken for test. Particular care is taken to prevent the loss of fibers in the treatments. It is advisable to cut cloth specimens on the bias in order to avoid fraying and loss of fibers. The specimen for test is dried to constant weight in an air oven at a temperature of 221 to 230° F. (105 to 110° C.). See III-6. This is the "weight of the dry specimen."

2. The specimen is then extracted for one hour with chloroform in a Soxhlet extractor. The specimen is allowed to dry in the air, and is then washed by immersion in hot distilled water and squeezing by hand.

3. The specimen is then immersed in a 0.5% solution of Diastafor or other suitable enzyme in water at 122° F. (50° C.), and squeezed by hand. This procedure is repeated with the same solution for a total of three times. The enzyme solution is then heated to 158° F (70° C.), and the specimen is immersed in it for a period of 15 min., the temperature of the solution being maintained at 158° F. The specimen is then rinsed twelve times in fresh portions of hot distilled water, squeezing by hand after each rinse.

4. The specimen from 3 is dried to constant weight as in 1. This is the "uncorrected weight of the dry cotton."

5. The specimen from 4 is ashed and the weight of the ash is subtracted from the "uncorrected weight of the dry cotton cellulose," section 3 above, to obtain the "weight of the dry cotton cellulose."

6. The results of the analysis are obtained by the following calculations:

$$\text{Percentage of total sizing, finishing, and other non-fibrous materials} = \frac{A-B}{(A-B) + 1.065B} \times 100 = \frac{100(A-B)}{A + 0.065B}$$

In which: A = "weight of the dry specimen" from V-1; B = "weight of the dry cotton cellulose" from V-5; $A - B$ = weight of total sizing, finishing, and other non-fibrous materials; and 6.5% = moisture regain allowed in converting dry cotton cellulose to cotton.

VI. *Breaking strength, grab method*—

1. Specimens 4 in. wide and not less than 6 in. long shall be taken for test. Two sets of five specimens each

are required, one set for warp breaking strength, having the long dimension parallel to the warp threads, and the other set for filling breaking strength, having the long dimension parallel to the filling threads. No two specimens in a set shall include the same threads except for retest as specified below. No specimen shall be taken nearer the selvage than one-tenth the width of the material.

2. The machine shall be of the inclination balance, or pendulum type. It shall be of such capacity that when the specimen breaks, the angle between the pendulum and the vertical shall be less than 45° and more than 4°. The jaws through which the load is applied shall move at a uniform rate of 12 in. per min. The distance between the two pairs of jaws shall be 3 in. at the start of a test. The jaws shall have smooth flat faces with edges slightly rounded to prevent cutting. The face of one jaw of each pair shall measure 1x1 in.; that of the other jaw of each pair shall be 1x2, or more, in., the long dimension being perpendicular to the threads to be broken.

3. The specimen shall be placed symmetrically in the jaws of the machine with the long dimension parallel to, and the short dimension at right angles to the direction of application of the load.

4. The breaking strength shall be taken to be the average of the results obtained by breaking five specimens. If a specimen slips in the jaws, breaks in the jaws, breaks at the edges of the jaws—or for any reason attributable to faulty operation, the result falls markedly below the average for the set—the result shall be disregarded; another specimen taken from the same threads; and the result of this break included in the average.

VII. *Breaking strength, strip method*—

1. Specimens of the width indicated in Table I and not less than 6 in. long shall be taken for test. Two sets of five specimens each are required, one set for warp breaking strength, having the long dimension parallel to the warp threads, and the other set for filling breaking strength, having the long dimension parallel to the filling threads. No two specimens in a set shall include the same threads except for retest as specified below. No specimen shall be taken nearer the selvage than one-tenth the width of the material. Each specimen shall be raveled to exactly 1 in. in width by taking from each side approximately the same number of threads.

2. The machine shall be of the inclination balance, or pendulum, type. It shall be of such capacity that when the specimen breaks, the angle between the pendulum and the vertical shall be less than 45° and more than 4°. The jaws through which the load is applied shall move at a uniform rate of 12 in. per min. The distance between the two pairs of jaws shall be 3 in. at the start of a test. The jaws shall have smooth flat faces with edges slightly rounded to prevent cutting. The face of each jaw shall be 1x1½, or more, in., the long dimension being perpendicular to the direction of the load.

Table I

Threads per Inch	Width of Specimen Before Raveling (Strip Method)
50 or over	1½ in.
Under 50	1½ in.

3. The specimen shall be placed symmetrically in the jaws of the machine with the long dimension parallel to, and the short dimension at right angles to the direction of application of the load.

4. The breaking strength shall be taken to be the average of the results obtained by breaking the five specimens. If a specimen slips in the jaws, breaks in the jaws, breaks at the edges of the jaws—or for any reason attributable to faulty operation, the result falls markedly below the average for the set—the result shall be disregarded; another specimen taken from the same threads; and result of this break included in average.

VIII. *Elongation of cloth*—

1. The elongation of cloth at any stated load (for example at the breaking load) shall be obtained when the breaking strength is determined and for the same specimens, by means of a suitable autographic recording device on the testing machine. The elongation shall be the average of the results obtained for the five specimens. It shall be expressed as the percentage increase in length. Since the initial length, and therefore the measured elongation, depends upon the load applied in placing the specimen in the jaws of the machine, an initial load just under that required to register on the dial of the machine is specified. In practice, it is advantageous to place the specimen in the machine at a somewhat lower load and to compute the initial length of the specimen from the distance between the jaws of the machine when the test is started and the distance the jaws separate before a just perceptible load is assumed by the specimen as shown by the graphic record. (*To be continued*)

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Gray Goods Clearing House Suggested

ESTABLISHMENT of a gray goods clearing house is suggested by Scheuer & Co., cloth brokers, New York, as a means of meeting the situation in cottons. The plan was outlined in that company's letter to the trade last Friday as follows:

"The challenging facts of reduced consumption are being forced upon us in a wholly unprecedented fashion. The shrunken volume of current gray goods trading is but one phase of a situation with which we will have to deal throughout the balance of the year. While we will experience flurries, there can be little question that total volume will be reduced. The gray market then, must prepare to carry a heavy burden, and we use the word 'prepare' advisedly.

"The emergency demands the creation of new machinery. We believe the most plausible procedure would be the establishment of a gray goods clearing house or several such organizations, to deal with the main types of fabric production. To be effective, such an institution would be empowered to clear all gray goods transactions and function in the nature of a visé service, in no way could it interfere with the initiative of the individual producer but it would limit his freedom of action in the matters of price and terms. Each mill or commission house could intensively strive for business on the basis of quality, delivery, fabric design and service, but they would not be permitted to take any business unless the clearing house was consulted and viséd the price and terms. This, of course, sounds much more forbidding than it really is; it could be operated on a thoroughly practical basis. We have no doubt that all important buyers of gray goods would cooperate in, and endorse, such an effort at stabilization and sanity. Indeed, we feel confident that they would accept membership in such a clearing house. This device offers a ray of hope not only to the efficient and well run independent gray mill but to its customer as well.

"Without some such intelligently (*Continued on page 56*)

Bulk-harvested cotton and cellulose derived therefrom

Progress in Growing Cotton for Cellulose Content

CULTIVATION of the cotton plant for its cellulose content, rather than for its lint value, made further progress last year, but efforts in this direction, although promising, are still in the experimental stage. In a recent statement to the southern editor of TEXTILE WORLD, Dr. Frank K. Cameron, professor of chemistry, and Nicholas W. Dockery, graduate student in chemistry, at the University of North Carolina, where research work is being conducted, indicated that recent studies have two primary objectives:

1. To determine if the cost of producing cellulose from the cotton plant, with the most efficient methods of cultivation, compares favorably with production costs in the case of spruce pulp-wood; and

2. To ascertain definitely whether or not the type of cellulose obtained from the cotton plant by this new method is suitable for manufacturing into the various products now made from cellulose, such as rayon, transparent wrapping materials, photographic film, and lacquers.

Experiments in the cultivation of cotton by different methods of obtain the maximum cellulose yield per acre have been in progress on the Dockery Plantation, near Rockingham, N. C., for three years. Continuation of this work during 1931-32 was made possible by means of a special research fund appropriated by the American Cotton Co-operative Association. The illustration above shows the harvested material after chopping (on the left) and the cellulose derived therefrom (on the right). The method of cultivation, as described briefly in TEXTILE WORLD (Jan. 10, 1931), is quite similar to that employed in growing hay.

The entire cotton plant, with the exception of roots, is used in the chemical processes; and, since the color or appearance of the fiber is of no importance, the problem of storing the harvested crop is simplified. Dr. Cameron stated that one bale, put up like a bale of hay, was left on a platform throughout the winter of 1931 in rain and snow without apparent damage to its cellulose content.

Laboratory tests at the University of North Carolina revealed that the cotton plant yielded its maximum cellulose content at the end of 23 weeks of growth. It was found that, whereas in 1930 the yield of mixed stalk and lint was approximately 1,800 lb. per acre, in 1931 production averaged 3,000 lb. per acre on a 10-acre field, and the maximum yield was 3,500 lb. per acre. The experimenters are hopeful of obtaining 5,000 lb. per acre this year.

Distinctive Contrasts

Feature Newest Rayon Fabric Styles

RECENT significant laboratory developments in rayon, put this yarn well in the foreground in any consideration of 1932 fabric trends. Styles for the current year include further emphasis on rayon mesh, and many striking new lace effects will be seen. It promises to be a season of interesting contrasts, with fashion pointing in contradictory directions: rough and smooth, firm and feminine, heavy and shear fabrics will be important.

Authoritative analysis of the trends is offered by E. C. Harrington, of the DuPont Rayon Co., writing in the February issue of "The DuPont Magazine." Mr. Harrington reviews 1931 rayon fabric tendencies and finds a definite relationship existing between them and the new styles which will bid for consumer acceptance this year.

"Meshes," he writes, "will be retained, but the 1932 versions are very different from the fabrics which preceded them. In all-over mesh textures a variety of interesting weaves and yarns has been exploited. Ratiné and bouclé yarns combine with mesh weaves in effects that are at once thick and light—thick, soft and spongy to the hand and yet open and light in weight. Fancy weaves, the craze of the season, also play their part here, to take the machine-made look from the meshes and impart something of the charm of hand-crochet.

"Geometric motifs, the stripe, rib and diagonal themes and other more fanciful motifs are expressed in open-work technique on delightfully soft and drapy spun-rayon grounds.

"Perhaps the most strongly entrenched carryovers from 1931 are the roughs. Starting with last season's plain and ribbed bouclés, they have been developed in an amazing variety. They may be found in any of the season's favored weaves. Wide and narrow ribs, diagonals, plaids, open-work effects, basket and yarn-dyed effects, and even jacquards are evidence of their diversification.

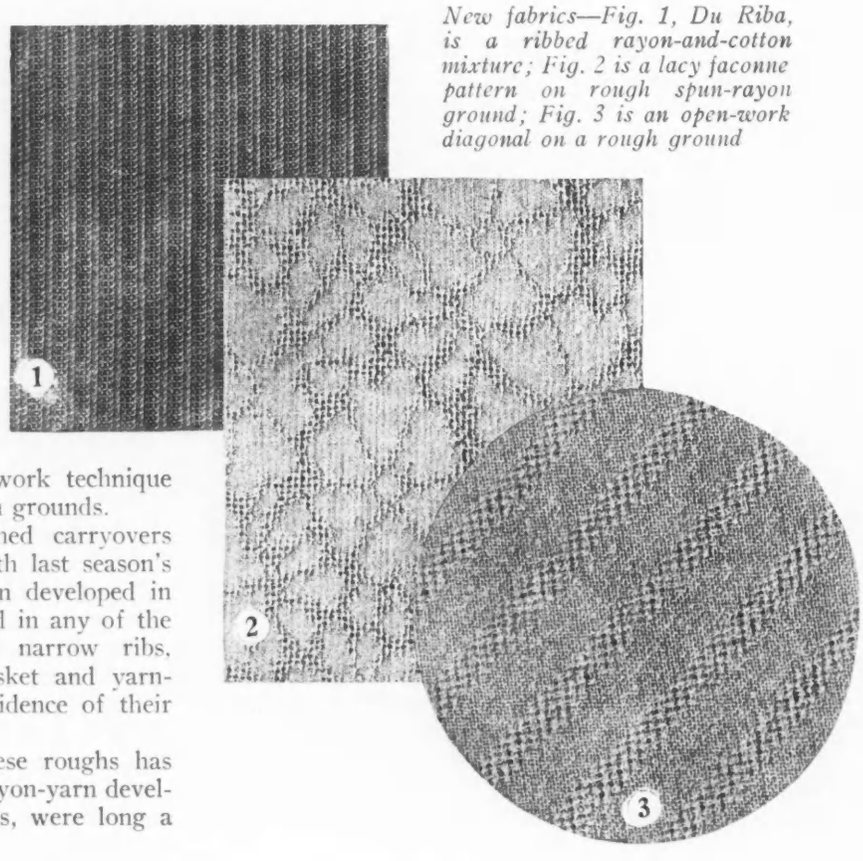
"In large measure the success of these roughs has been due to the great strides effected in rayon-yarn developments. Roughs, made of ratiné yarns, were long a bugaboo to merchandisers. The new rayon, spun rayon and other fiber-combination ratiné yarns eliminate the scratchiness of the older type and permit raised effects and rough surfaces to be woven without any of the associated bulk. Light-weight cloths with delightfully woolly handles have been the result, and many of them are washable.

"Rough rayon fabrics on the silk order are even newer developments. Not of ratiné, these cloths achieve their roughness by deeply-crinkled surfaces and very irregular crepe yarns. Crepons, corrugated crepes, roshanaras and ribbed crepe weaves may be regarded as the 'dernier crie' in the tendency to go rough. Introduced at first as high-style evening fabrics, they are fast becoming the much-wanted daytime sports materials.

"At the other extreme are the smooth fabrics. In a sense these must be distinguished from flat fabrics, for despite their smooth hand and soft drape, they all boast of some sort of surface decoration which gives interest to the texture. Ribs, both diagonal and horizontal, piqué effects, and even tiny façonné figures are the favorites. Soft materials of the so-called toile types and flat crepes serve as grounds.

"In the smooth category also, and replacing the long-held dominant position of flat crepes, are the semi-sheers. These are new departures of this season. In spun rayon there are many modeled upon the woolen order which, in spite of their woolen handle, have a soft drape and are cool to wear.

"As the season advances, smooth fabrics will very likely gain accent. Worsted-like weaves, flat serges, poplins and even gabardines, expressed in textures of fine-spun rayon — which eliminate the hardness, but retain the smoothness of worsted—will be shown. Possibly, too, these materials will take on the mannish aspect of suitings, flat, smooth and with tiny weaves. If this is so, the daytime mode will become definitely tailored."



New fabrics—Fig. 1, Du Riba, is a ribbed rayon-and-cotton mixture; Fig. 2 is a lacy faconne pattern on rough spun-rayon ground; Fig. 3 is an open-work diagonal on a rough ground

Garment Makers *as Part of Great Industry* Worried over Taxes and Abuses

AT ITS 25th annual convention in Chicago, Mar. 1 to 3, the International Association of Garment Manufacturers concentrated its attention on four main subjects: (1) Federal manufacturers' sales tax, regarded by them as inevitable; (2) returned goods evil; (3) competition of prison-made goods; (4) unfair competitive practice, now worse than ever.

It is a waste of time now, the garment makers are told by their representatives in Washington, to try to stop the sales tax. Receipts from the income tax will be so largely dried up the next year or two that law-makers will be forced to levy on sales to balance the national budget. The garment makers take the position that they will be better off if, instead of protesting noisily, they get down to brass tacks and start working with legislators to devise a manufacturers' sales tax that will carry a minimum burden of accounting and red tape and be a minimum encouragement to unfair trade practices.

A committee headed by Harry Liebovitz of New York was named to undertake this work. Among other things, it is instructed "to request the advice and cooperation of representatives of the organized textile industry."

A greater degree of united action in this and other matters of common interest would be a good thing for textile and wearing apparel industries, garment leaders believe. The sprawling, divided, loosely organized industries engaged in making clothing have no united voice. If they had, it would be a big one.

The sum total of business done by these manufacturers is much larger than most of them believe. When A. F. Allison, secretary of the association, reported the fact, dug out of the 1929 census of manufactures, that consumer goods made by the wearing apparel industries, when lumped in one figure, exceed 4.25 billion dollars, and that this compares with 3.75 billions of motor vehicles and 3.4 billions for meat packing, he was heard with open-mouthed wonder by men who had been making garments all their lives, but who had no idea they were in such a big business.

Because of its very looseness and its many scattered units, the wearing apparel industry will suffer more than other large industries if a too involved system of sales tax accounting is imposed. Thousands of small garment manufacturers are none too strong on accounting technique as it is. If it should turn out that the manufacturers of cloth going into the garments pay a tax too, the load on the industry will be heavy.

As a step toward solving the second main problem discussed at the convention, that of paring down wastes due to returned goods, an inexpensive plan is to be put into operation at once. Members will report to association headquarters the names of habitual returners. These will be collected and published for confidential circulation. Each member will get forms on which to report cases of what he believes to be unfair returns. Any buyer mentioned in three such reports will receive a letter from the association asking that he state his side of the case so that the trouble can be corrected.

A conference to which representatives of other interested industries were invited was held to discuss minimizing bad effects of prison-labor competition, third main topic of the convention. The approach to a solution, as it was discussed, is in more adequate study of the purchasing requirements of Government bodies and better planning to the end that prison industries will produce what States and their governmental subdivisions have to buy.

Trade practice discussions, fourth main topic, were much like those in many other industries in recent years, excepting only that the competitive abuses from which relief is sought are more acute than usual in garment industries right now. A lot of little marginal producers are fighting for their lives. If it is necessary to label a shirt "pre-shrunk" in order to sell it, they are likely to do so. Falsification and misrepresentation is widespread. About all that is now being done about it, however, is to set the slow trade practice wheels in motion and get men in the industry to thinking how unfair competition may be outlawed. Purpose is that prompt action shall follow anticipated changes in Federal regulatory laws.

Garment makers, in their gatherings, sometimes voice criticism of the textile industry which, while not new, may deserve renewed attention in these troublous times. The problem now is to make the consumer buy. To make merchandise highly appealing requires that producers all along the line, textile and garment alike, think in terms of consumer wishes.

"Your conservative old New Englander and your production minded southern textile baron are alike in one way—they both think yardage, yardage, yardage," asserted a garment man to the TEXTILE WORLD representative. "You don't sell yardage to people to wear."

Exhibitors at the convention numbered 42, about a third less than in previous years. Attendance was similarly reduced. Spirit was good—"a tone of quiet optimism" one textile exhibitor called it. The feeling that the worst is over and that at last we see a little daylight ahead appears to prevail.

Ralph Hunter, president of Hall, Hartwell & Co., Troy, N. Y., was reelected chairman of the board for another year. A. F. Allison, secretary for 15 years past, continues. C. T. Habegger of Berne Mfg. Co., Berne, Ind., was advanced from vice-president to president, being succeeded as vice-president by M. Edward Rowan, Elder Mfg. Co., St. Louis.

Textile firms among the exhibitors included: Joshua L. Baily, Wm. L. Barrell, Bliss-Fabyan, Cohn-Hall-Marx, Cone, Hunter, Juilliard, M. Lowenstein, Merrimack, Pepperell, J. P. Stevens, Turner-Salsey, Wellington-Sears, etc.

Cotton-Cloth Standards *for Coated Fabric Use*

DETAILS of a commercial standard covering the construction, quality, sizing, testing, and labeling of cotton cloth for rubber and pyroxylin coating are given in a bulletin issued recently by the U. S. Bureau of Standards. Acceptors of this standard, which became effective on June 15, 1931, include a number of trade associations, textile manufacturers, makers of coated fabrics, and federal departments. On recommendation of the Cotton-Textile Institute, Inc., the "certification plan" will be applied, thus providing a list of manufacturers who are willing to certify to purchasers that products supplied by them comply with all requirements and tests set forth in the standard. The specifications, exclusive of test methods, as given in the standard are as follows:

Quality—The cloth shall be made of cotton thoroughly cleaned and carded, free from waste, and shall be of good commercial quality, evenly woven.

Width—The width of the cloth shall not vary more than plus or minus 1.5% from the specified width.

Count—The count of the cloth shall not vary more than plus or minus 2% in the warp and 5% in the filling from the specified count. The variation in count in a shipment shall not exceed 1% in the warp and 3% in the filling.

Unit Weight—The unit weight shall be expressed in linear yards of the fabric per pound and shall be determined from the invoiced yardage and the weight of the entire roll or piece (both verified when necessary). Such weight shall be as specified for the fabric in question, with a minus tolerance of 1% on a shipment, 2½% on a roll, and 5% on a piece, from the specified weight.

Sizing—As little sizing shall be used in the fabric as is necessary for its proper manufacture. The total percentage of sizing, natural oils, and waxes shall be no more than is stated as follows for each type of fabric: Sheetings, 8.5%; drills, 11%; sateens, 10.3%; and broken twills, 8.2%.

Injurious chemicals—It shall be recognized that the chemicals listed below are injurious to rubber, and, insofar as they come under the control of the mill, the quantity shall not exceed the following percentages: Copper, 0.001%; manganese, 0.0005%; and grease, 1%.

Tensile strength—The specified tensile strength shall conform to the requirements given in Table I. In the case of constructions not pro rata to any of those listed in Table I, the strength shall be agreed upon when the contract is placed.

Length of Cuts—For sheetings two classes of delivery in respect to length of piece may be specified in the purchase contract: (1) Double cuts as far as practicable; (2) long cuts. In the classification known as "double cuts as far as practicable," 10% of pieces in from 40 to 80-yd. lengths will be accepted at the contract price, the balance to be in pieces not less than 80-yd. in length. The designation of long cuts of sheetings shall require an average length of piece of 250 yd. with a minimum of 200 yd., the supplier having the privilege of applying up to 10% if made of pieces from 100 to 200 yd. in length at the contract price.

For drills the designation of long cuts shall require an average length of piece of 175 yd. with a minimum of 120 yd., the supplier having the privilege of applying up to 10% if made of pieces from 60 to 120 yd. in length at the contract price.

For sateens, broken twills, and moleskins the designation of long cuts shall require a minimum length of 120 yd., the supplier having the privilege of applying not more than one 60-yd. piece for 500 yd. shipped at the contract price.

Defects—Cotton cloth purchased under these specifications will be used in the manufacture of coated fabrics, and the vendor, in the manufacture and inspection of these goods, shall endeavor to meet the requirements of this industry. All fabrics shall be inspected and burled on both sides.

Oil spots, holes, torn selvages, and warp streaks shall not be present in cloth furnished under this specification. The imperfections listed below shall be recognized as major defects and shall not occur in a roll of cloth on an average of more than once in each 15 yd. A minimum allowance of ¼ yd. shall be made for each major defect.

Major defects include smash, starchy places, group float, two contiguous filling threads missing, washed-out oil spots, heavy filling, shuttle mark, heavy warp, and kinky filling. These defects are probably not all which should be listed, so that this list is subject to change by common agreement. Also one major defect on the average of every 15 yd. does not represent the quality desired, but has been suggested as a fair basis both to mill and to consumer. The aim of the mills will be so to improve their quality that this average yardage between defects may be increased.

Selvages—Selvages of these fabrics shall be of uniform width and of equal width on both edges of the fabric. Selvages shall be so made that the tension shall be the same as that of the body of the cloth. Baggy goods and curling selvages shall be cause for rejection.

TABLE I. TENSILE STRENGTH OF COTTON FABRICS

Type of Fabric	Width, Inches	Construction, Including Pro Ratas Construction	Linear Yards per Pound	Minimum Breaking Strength, Pounds Warp	Filling
Sheeting	66	48 x 48	3.00	35	25
	63	48 x 48	3.14	35	25
	60	48 x 48	3.30	35	25
	57	48 x 48	3.47	35	25
	52	48 x 48	3.85	35	25
	50	48 x 48	4.00	35	25
	49	48 x 48	4.05	35	25
	48	48 x 48	4.17	35	25
Drill	59	48 x 48	2.25	58	36
	66/67	48 x 48	1.87	60	40
	65	48 x 48	1.93	60	40
	52	48 x 48	2.38	60	40
	49	48 x 48	2.53	60	40
	52	48 x 48	2.20	62	48
	59	48 x 48	1.85	72	43
	56	48 x 48	1.93	72	43
	54	48 x 48	2.00	72	43
Twill	69	48 x 48	1.37	80	59
	59	48 x 48	1.60	80	59
Broken twill	54	85 sley	1.14	95	110
	56	85 sley	1.10	95	110
	54	76 x 52	1.14	100	100
	56	76 x 52	1.10	100	100
	54	85 x 64	0.98	110	130
	56	85 x 64	0.95	110	130
Sateen	54	96 sley	1.55	110	50
	54	96 sley	1.30	110	75
	53	96 sley	1.32	110	75
	54	96 sley	1.10	125	95
	53	96 sley	1.12	125	95
	54	96 sley	1.05	125	120

Textiles at British Fair *Indicate Newest Style Trends*

Acme

Manikin at British Fair dressed in enough worsted yarn to reach from London to Birmingham

THE Textile Section of the British Industries Fair was a far more comprehensive display than has been staged in previous years and most sections of the British industry were well represented. From an esthetic standpoint the two miles of stands beautifully decked in gorgeously colored materials representing the latest advances of the textile dyer, printer, finisher and designer, proved exceedingly attractive.

For the first time the fair was supported by the silk industry. Many advances have been made by British silk manufacturers, who now claim to be able to produce all the fabrics previously considered the monopoly of Continental manufacturers. Particular progress has been made with georgettes and crepe-de-chines, and several British silk firms are now producing chiffons which are the equal of anything produced in France. Perhaps the biggest developments have taken place in silk dyeing, printing and finishing, and the color effects have reached a degree of beauty never previously attained. There is a delightful selection of ripple crepes, in which no weighting is used. Courtaulds, Ltd., were making a special feature of a triple real silk ninon. There was an interesting range of Macclesfield tie squares in poplin and other weaves, a class of material which British manufacturers used to supply in large quantities to the United States market. In silk furnishing fabrics, there were many gorgeous tapestries, and period designs in faded colors were prominent.

In rayon goods there were several new constructions, never previously made on British looms. A fabric of 100% rayon, called pique but which is actually a Bedford cord in construction, is expected to prove an important line for the blouse trade. Flat bright-luster crepe-de chines in plain and printed styles are well worthy of attention. After the introduction of several rayon chiffons about 12 months ago, which did not meet with much success, an all-acetate chiffon which has the ripple effect usually associated with silk chiffon, has been brought out in a delightful range of delicately printed designs. British manufacturers are now replacing the umbrella fabrics in all-rayon, which previously came from Germany. These are made from fine viscose yarns of about 5 turns per inch, are 19 in. in width and sell at 11½d. per yard to the umbrella maker. Rayon mousmé crepe is a new fabric in cotton and rayon, which has a cotton slub effect in both warp and filling and is printed in attractive design. Rayon venetians with a cotton filling and a rayon face warp, are popular for corsets.

There are few really new rayon yarns on the market, though the leading producing company is now doing a big trade in grenadine yarns on hosiery cone for the stocking trade. These are mostly in "Dulesco-Matt" with a twist of 10½ turns per inch. The resulting effect is a stocking of greater durability than formerly, and at the same time it has an attractive appearance and soft handle. Among knitted novelties is a "Wolsey" cut pile velvet with soft suede finish, suitable for evening wear.

The main tendency in woolen and mixture knitted outerwear is toward tailored tweed effects. Similarly on the woven side there are many attractive wool crepe fabrics in printed and woven tweed effects. The Lancashire Cotton Corp. has introduced a new wool and cotton doubled yarn in which the cotton is spun from cheap Indian staple, and the result is a yarn for the production of exceedingly cheap suiting materials, which were formerly imported from the Continent.

On the cotton side there are many interesting dress fabrics, which rival wool and rayon in appearance and are much less expensive. The big feature of the dress goods trade is the vogue for cotton tweeds with a wool handle in plain and printed designs. A ratine in woven check designs is prominent in this connection. Sponge cloths are also becoming popular for the tweed trade. Lawns, haircords, and organdies in greatly improved finish are popular in the printed trade, and check and tweed designs are similarly so. There is a definite vogue in every section of the trade for woven and fancy ground rather than the plain weaves which have held the sway for so long.

In rayon dress goods a brocade suede crepe has been introduced with an over-print design, and another rayon dress brocade has a moire effect in warp printing in the ground. Even in the men's trade there is a pronounced tendency toward more woven effects.

Progress *Made by School of Textile Engineering* at Auburn

By P. O. Davis

Department of Public Information, Alabama Polytechnic Institute.

Prof. E. W. Camp, head of textile department of Alabama Polytechnic Institute

ON THE theory that natural and economic conditions in the South are favorable to textile manufacturing the Alabama Polytechnic Institute, Auburn, Ala., has proceeded to build and operate a School of Textile Engineering for the purpose of training young men for the textile industry. In announcing—three years ago—that such a school would be built, President Bradford Knapp said that these advantages would never be utilized without competent men thoroughly trained. Alabama—being a cotton producing and textile manufacturing State—he concluded, should be a leader in training men, and thereby meet the requirements and contribute to the onward march of the textile industry, not only in Alabama but throughout the South.

The first step, after the decision, was to employ Professor E. W. Camp, then of the Texas Technological Institute, Lubbock, Texas, to be head of the proposed school. Prof. Camp, who was the first student to graduate in textile engineering at Georgia Tech, welcomed an opportunity to be near his original home.

Under "School of Textile Engineering," the college catalog says:

"The School of Textile Engineering was established to meet the demand for men with a thorough technical training in the arts and sciences directly applicable to the textile industry. The school offers excellent opportunities to the students who intend entering this industry.

"As a foundation for the work in textile engineering, a broad education, including courses in the following, is given, in addition to purely textile subjects: mathematics, chemistry, physics, engineering drawing, English, history, surveying mechanical engineering, electrical engineering, public speaking, business law, economics, sociology and industrial management."

"Owing to the demand for men highly specialized in the various divisions of the industry, four year courses leading to the Degree of Bachelor of Science in Textile Engineering are offered in the following: (1) Textile manufacturing option; (2) Textile design option; (3) Textile chemistry and dyeing cotton; and (4) Textile administration option.

"In order to avoid mistakes in choosing a course for which one is best fitted, and to enable the student to profit most by the course selected, it is recommended and stressed, that the prospective students obtain practical work in a textile mill. All candidates for graduation in textile engineering should by all means have not less than 75 days of practical mill experience. It is recommended that this work be done during the summer, or before entering college."

The Auburn School of Textile Engineering was opened with the regular session of college in September, 1929, when 45 students were enrolled. During that year they received textile instruction in temporary quarters, but next year they moved into a handsome, large and modern building, erected and equipped for textile education. The second year enrollment increased to 56; and the first semester of the 1931-32 session it was 63.

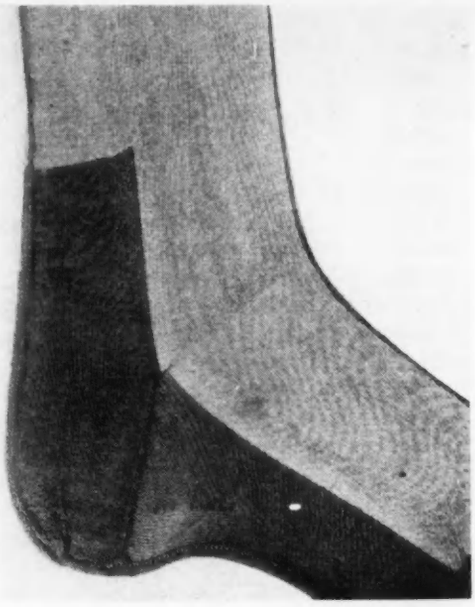
The total floor space in the building is 42,000 sq.ft. of which 6,000 sq.ft. are in the basement and 18,000 each on the first and second floors. The outside dimensions of the building are 300 x 60 ft. The walls are of brick and concrete, while floors are of wood and other slow burning material. Alabama Polytechnic Institute has expended on this building and equipment to date more than $225,000, while additional equipment will be installed as funds become available.

Although proud of his building and equipment, Professor Camp insists that they are secondary to the value of the young men who are students. "Our purpose," he said, "is to give young men a good general education plus special textile training.

"Our aim is to turn out students who will become leading citizens—young men who will aspire to succeed, not only as textile engineers, but also to become good leaders in their respective communities, for we know that high-quality citizenship is essential to success in the textile industry."

One room in the textile building is devoted to sampling cotton and a set of the "universal standards" is on display. In another room is machinery for picking, carding, drawing and roving. Separate departments are devoted to spinning, weaving and jacquard weaving. The dyeing department is not yet fully equipped but despite this handicap good work has been turned out on make-shift equipment.

Prof. Camp is assisted by Professor Chas. B. Ordway, Professor W. E. Tarrant, and a student assistant, Jesse M. Jones. In teaching students, practical work is combined with instruction in principles. In classwork principles are explained after which they are applied in practice.



The dyer can do little to remedy variations in shade caused by a change of silk such as shown above in the difference between the foot and leg in a full-fashioned stocking

One-Bath Method

Minimizes Shade Variations in Dyeing Silk Hosiery

By William H. Lorimer

USE of high-twist yarns in the knitting of silk hosiery brought with it problems which at times seemed insurmountable, and many mills met with grief in attempting to turn out an attractive product. Not only did the manufacturer of hosiery have difficulty, but the throwster had considerable experimenting to do before he knew best how to handle these yarns. In the meantime, the user of the silk was confronted with obstacles which were caused by lack of knowledge on the part of the throwster. Mills encountering these troubles changed yarn at brief intervals, and as a result, had a little of everything on hand. When hosiery containing mixed yarns went to the dyehouse, the dyer had no end of trouble trying to produce salable merchandise.

Conditions have improved to a considerable extent, but the dyer is still faced with the problem of producing even shades on hosiery containing high-twist yarn. Among the chief causes of variation in shade are included the following: (1) use of different lots of silk in the same stocking, (2) use of different lots of silk in the same batch of hosiery, (3) silk not twisted uniformly, (4) hosiery knit tightly in some places and loosely in others, (5) hosiery improperly boiled off, and (6) faulty application of dyestuffs. The dyer can do little to obtain uniform shades on hosiery containing mixed lots of yarn; but he can in many instances counteract the other conditions which are liable to cause shade variations.

Often it is difficult to dye uniformly a batch of hosiery containing two lots of silk, some of the stockings coming out one shade, and others of another. This is especially true when the two lots of silk vary in their natural color, or when they have been allowed to age in the gray for different lengths of time. While it usually is impossible to dye the entire batch of hosiery to one shade, it is advantageous to keep separate the hosiery made from each lot of silk. That is, when the hosiery is put in the dye nets, care is taken to have each net contain stockings made from the same lot of silk. The nets are then tagged in such a manner that in the finishing room hosiery made from each lot of silk can be paired separately.

In the event that the hosiery contains silk which is not uniformly twisted, it is rather difficult to obtain even shades in the dyehouse. The writer has found, however, that best results are produced by the one-bath method of dyeing. It appears that in this process the alkali which is present in the dyebath tends to retard the rate of absorption of the dyestuffs on those parts of the hosiery made up of the looser twist, and at the same time serves to promote better penetration in those parts made of the tighter twist yarns. Therefore, when lots are dyed by the one-bath method, it often is somewhat difficult to find unevenness in a lot containing silk not uniformly twisted.

In the case of hosiery which is knit tightly in one place and loosely in others, it has also been found that here again the one-bath method is preferable. This is because the alkalinity of the bath retards the rate of absorption of the dyestuff and at the same time enables the color to penetrate more readily in those places where the knitting is tight. As a rule this method makes the lot passable; but does not entirely eliminate shaded parts, especially in hosiery which has been knitted tightly in the foot and loosely in the leg.

Frequently unevenness of shade is due to goods not being properly boiled off. Since tightly twisted yarns are difficult to penetrate, hosiery containing them requires considerable attention in the boiling-off operation. The goods must be boiled off properly, or an uneven or shaded lot is the result.

Faulty application of dissolved dyestuffs will result in uneven shades; therefore the dyestuff should be strained and added to the bath slowly and uniformly. If the dyestuff is entered into the bath too quickly, concentrated dyestuff pockets are formed, and shaded work results. When dyeing hosiery containing high-twist yarn, it is also important that only colors which exhaust slowly be employed.

Twists, Humidities, and Speeds in Cotton Spinning and Warping

ALTHOUGH the morning session of the Spinning Overseers' Forum, held under the auspices of the National Association of Cotton Manufacturers and reported in the Feb. 27 issue of TEXTILE WORLD, was of unusual interest, the afternoon session vied with it in the importance of its discussions. Of particular interest was the description of a new warping system permitting a speed of 900 yd. per minute. Other topics included twist variations, sloughing of yarn from bobbins, atmosphereic conditions, long drafting, spinner patrols, and end breakage.

The principal cause suggested for variations in twists in yarns from the same frame was slack bands. It was pointed out that there is some slippage on tapes, but nowhere near the amount experienced with bands. One mill, according to its representative, goes over the bands once a week and cuts off those which are slack.

Variations in the amount of pressure on the rolls was offered as another cause for twist variations. "Twist is determined by the number of inches delivered in a given time," said one spinner. "If I am not mistaken, all the weights that come with the rolls are cast. I have checked up on weights and I have found that if I am supposed to have a 2½-lb. weight, it will vary from 2¼ to 2¾ lb. This will give more pressure on some places than on others, and the twist will be affected."

An experiment on slack bands was explained by another speaker. "I go around and test the band pull every so often with a band tension device," he said. "It looks like a ragman's scales. In trying out the different sections I have found in one room that one section hand banded his bands about 5½ lb. and that another section hand had a pull of about 4½ lb. Another had 7 lb. So you see, there are hardly any two men alike. They thought they were doing it all right, of course, and it was interesting to see how they adapted themselves to a standard pull. We showed them their mistake; and a short while afterwards, about a couple of weeks, we had a pull of about 4½ to 5 lb. We found that this had a great deal to do with the variation in the twist, and also with the horsepower and the wear of the bands."

Another explanation offered for variations in twist was the use of too light a band. One spinner who had been using a single-loop band on a very heavy spindle, running at about 5,000 r.p.m., adopted a larger double-loop band with good results.

Satisfactory Twist

In discussing the amount of twist most satisfactory from the standpoints of break and wear, one overseer declared that he does not think strength and wear are necessarily the same, but that as far as tensile strength is concerned a multiplier between 4 and 4.6 is most satisfactory. "We have experimented with several different staples," he said, "and it rather appears to us that the same twist multiplier does not always give the same strength. That is, with a longer cotton the twist multiplier for the maximum strength is less, running down perhaps to 4¼ on cotton up towards 1½ in. and running up to perhaps 4.6 on 1-in. cotton."

Several of the spinners present described tests conducted in their plants, not all of which were directly related to the subject of twist. One of these showed, it was reported, that many mills take a lighter yarn off the slasher than they put on to it. Apparently the difference is due to stretch; and in some cases, according to one speaker, the issuing yarn is lighter than the percentage of starch put on.

"We ran one set of experiments that were rather interesting," said one overseer. "They proved to our satisfaction at least that the fabric construction controls to a great extent the increase or decrease in the warp or filling strength. Taking the same warp, we wove a series of cloths with the same number of picks, varying the weave from a 6x6 basket down to a plain weave. You could plot the loss in strength of your warp as you increased the amount of interlacing. That is, with a 6x6 basket weave you had the strongest warp strength in the cloth; and when you got down to the plain weave where you had the most interlacing, you had the least strength. It didn't always follow that you had a corresponding gain in the filling strength; although it roughly followed that the more warp interlaced with the filling, the more gain in filling strength. We decided that, after checking it in other ways, the controlling factor in what was gained or lost in the warp was a matter of how many times one yarn was bent around another."

Yarn Sloughing Off Bobbins

The next question raised was whether, to prevent yarn sloughing off the bobbins, it is more desirable to run the rails up fast and down slow or to run them up slow and down fast. A speaker declared that his rails run up slow and down fast because that is the way the machines are designed and he sees no reason for changing. Another prefers the so-called Draper traverse, which is down fast. "I think you will find," said the chairman, "that the weaver usually wants the rail to go down fast and up slow, but for the spinner up fast and down slow is the easiest on the yarn. In other words, you get a little better spinning by having the rails go up fast and down slow. We do not have much trouble in the weave room from sloughing off. I think that sloughing depends more on whether your guide rods stick or upon whether your traverse is long enough on the filling."

Another speaker runs his rails down fast and up slow because his weavers request that method, although he agrees that from the theoretical standpoint it is better to run down slow and up fast. He conditions his yarn. Another overseer pointed out that, in running rayon on a spinning frame for high twisting, a cam is sometimes

used which makes the rail run up and down at the same speed, and he suggests that this method might be applicable to cotton. Another has found that the humidity in the room has a great deal to do with sloughing off and believes it is largely governed by the question as to whether the room is humidified 24 hours a day, whether the air circulation is proper, how much humidity is being maintained, and what temperature is employed.

Atmospheric Conditions

The latter remark brought the discussion to a consideration of humidity. One man stated that ordinarily he maintains 50 to 55%, but that on Saturday afternoons and Sundays he brings this down to 45%. In answer to a question, he stated that he has no trouble with rusting of rings and rolls. The weave room, he said, maintains a humidity of 70% 24 hours a day, and brings it down to about 45% on week-ends. This causes a certain amount of rusting on drop wires which are not properly coated, he admitted, but causes no trouble if the drop wires have been properly cared for in that respect. The advantage, he pointed out, is that it is unnecessary to lose so much time in the morning when starting up after the week-end. His humidification system is automatic.

The representative of a humidification-equipment manufacturer discussed the problem as follows: "We have been told by some customers that they have had to have a humidity of 65 to 70% in the spinning room to have their yarn run well. Our experience in checking up on conditions in the mills where they are able to hold any humidity they want by the latest types of humidifying devices and automatic control has been the noting of a tendency to reduce the humidity to between 50 and 60%, and in some cases as low as 45%. You have got some opposing factors there. The yarn is stronger and more pliable and contains less static electricity as the humidity is increased. As a result of that increased humidity and increased moisture content, there are fewer end breakages originally; but when the breakages do occur, the higher moisture content in the yarn and the more sticky condition of the yarn causes a greater tendency toward lapping up on the rolls.

"The question of temperature in mills is a matter of maintaining uniform humidities and also of maintaining comfortable conditions. So far as the running of the work is concerned, high temperature is not a disadvantage, particularly if the proper humidity is maintained. The higher the temperature, the more serious the irregularities in different parts of the room, and the more serious the changes in outdoor conditions are likely to be. In the summer when you have got a very hot, dry outdoor condition, and your ventilation is adjusted for that condition, if there is a change, you are likely to have a serious alteration of the condition of the humidity indoors in different parts of the room, from one side to the other, depending on which side has the open ventilators. The tendency nowadays is to operate at a humidity and temperature which gives best uniformity of humidity and makes it reasonably comfortable for the operatives.

"A very important development lately is the tying up of ventilation with humidity control. We have been working out a system of controlled ventilation which will practically make a central station equipment of the ordinary type of humidifying system, plus ventilating fans hitched up with humidity and temperature control. This gives much more uniform conditions, regardless of outdoor weather, than existed when the ventilation was left to the control of the overseers.

"It isn't really essential to run 24 hours a day in the manufacturing department unless the plant is running 24 hours a day; but it is desirable to start up the humidity two or three hours before the machinery starts. It stands to reason that the cotton is going to be slow taking on the moisture, and the outside layers of the roving in the creels are going to take it up first. In the weave room it is more important to start up several hours before the machine starts, I think, than in the spinning room; but in any case it is well, if the conditions are such that it can be done, to start up the humidifying system at least an hour before the machinery starts up."

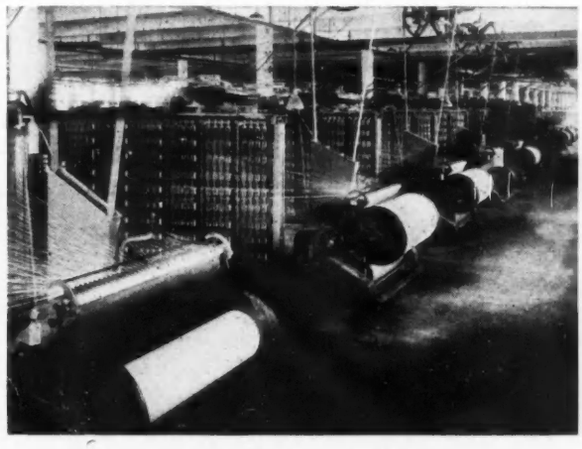
A spinner declared that at about 76° F. and 50% relative humidity there are about five grains of moisture to a cubic foot of air, and he believes that that is about the best running condition which can be attained. "If the temperature goes up to 80," he asked, "why wouldn't it be right to keep the grains of moisture to the cubic foot of air at five, if it could be done?"

The previous speaker replied as follows: "The absolute number of grains of moisture per cubic foot is not the important factor influencing the moisture content of the yarn. Strangely enough, it is the relative humidity or percentage of saturation which affects the moisture content of the yarn more than the absolute grains of moisture per cubic foot. It is for that reason that, as the temperature of the room increases and the moisture-holding capacity of the air increases, it is necessary to hold a higher moisture density in the air, more grains per cubic foot, to maintain the same relative humidity. If you kept the five grains and introduced the higher temperature conditions, the relative humidity would be considerably less and the yarn would lose moisture and be weaker. There would be more fly, more static electricity, and weaker yarn."

Long-Draft Spinning

As is the case at all meetings of cotton spinners today, the subject of long-draft spinning came up for discussion. Less time than usual was devoted to it, however. Drafts reported by the representatives of various mills were as follows: 14, 18 on 29s, 15½ from double roving, 20 from single roving, 21, and 18.6 to 19.2 on 24s and 28s warp.

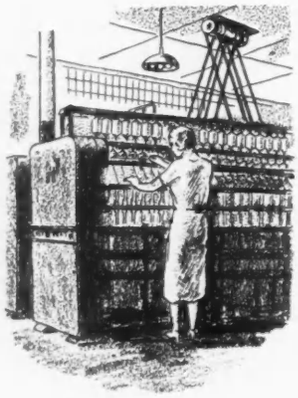
"I think the important thing to bring out," said one representative, "is how far you can go without going back. That is, if you can get a certain break with your regular-draft system, how far can you go with the long-drafting system before you get a lesser break? When we get to about 18 we begin to go back, and below 15



Typical installation of high-speed warping equipment

there is no gain. Therefore, we are drafting on our regular yarns about 15 and getting about a 5% better break than we obtained with our old draft of ten. That is on double roving."

Another spinner remarked that for a time he was spinning 60s yarn from 8-hank roving and that, although no difference in breaking strength was found as compared with a 12-hank roving formerly used, the cloth looked more uneven. Therefore a change was made back to 12-hank. One other report was to the effect that a mill which had been spinning 28s yarn from double 4.40-hank roving made from $\frac{5}{16}$-in. cotton and obtaining a break of 60 or 61 lb. changed over to 1.55-hank roving and obtained a break of 64 lb. with long draft.



An overseer whose spinners do nothing more than spin and creel described an interesting patrol system. "We have a system of clocks," he said, "by which the patrol control is regulated. Each clock is connected with an electrical system of the mill. The spinner starts with the clock and, if she gets back before the pointer is up, she can rest until it does come up. We have her take the bobbin out when the bare bobbin shows, and we do not let her take it out before it shows. That gives her a leeway of about five minutes, I believe, over the regular control period. That is, from the time that bobbin shows until it runs out is a period of about 25 minutes, so that a spinner going down her alley, if she sees her bobbin just ready to go on to the last layer of yarn, will walk by it, leaving it until the next time, because she knows she has plenty of time to get around to it again. It eliminates a certain amount of waste and positively eliminates any roving run-outs if the work is done right."

In discussing specialized cleaning, it was reported that one mill which has been using one cleaner for 21 frames found it necessary to reduce the number to 20 frames in order that the work would be satisfactory and there would not be too much burden on one cleaner. Another mill recently found it necessary to reduce the number of frames from 32 to 27. It was pointed out that the cleaners are not so interested in doing a thorough job of cleaning as are the spinners themselves, and the question was asked as to how the work of the cleaners should be checked up. One opinion was that the spinners should report on the thoroughness of the work. Another was that the second hand should check a certain number of frames each day.

End Breakage

In a discussion on end breakage, it was pointed out that if a mill is striving to obtain as much yarn as possible on a bobbin, it is likely to have more end breakage at the beginning of the doff when the tension is greatest. A satisfactory end breakage on 30s yarn made from 1-in. dirty cotton was declared by one spinner to be 30 ends per thousand spindles per hour. Another stated that he has seen as low as 25 ends down on $\frac{5}{16}$ cotton during a week's test on 23s yarn. From numbers from 40s to 60s 36 ends down was declared to be satisfactory. A certain mill operating on voile twist reported an end breakage per thousand spindles on filling of from 16 to 20 and on warp from 20 to 25. The twist in the latter case runs from six to seven times the square root and the spindle speed is 9,800 r.p.m. On 40s warp, with a spindle speed of 8,600 and a draft of $13\frac{1}{2}$, another mill has an end breakage per week of about 31. On filling this same mill spinning with the same draft at a spindle speed of 9,100 r.p.m. from $1\frac{1}{16}$ in. cotton has 40 ends down. Both warp and filling in the latter case are five times the square.

In answer to the question "How much variation would you consider within an acceptable range?", one spinner specified one between 25s and 40s and one and one-half between 40s and 60s.

Spooling, Winding, and Warping

The experience of one mill with Barber-Colman spooling and warping, as reported by its representative, was the cutting in half of spooling cost and an appreciable reduction in loom stoppage due to elimination of stretch in the yarn. A reduction in breaks of 50% on the twister was reported by a user of the Universal No. 40 winder, and no stretching of the yarn was found. The chairman remarked that in his opinion considerably more stretch is experienced on the Barber-Colman machine than on the old-fashioned spooler. Another speaker reported a reduction in spooling costs of one-half following the installation of Barber-Colman equipment and a reduction in warping costs of even greater proportions. "The big thing was the increase in weaving production," he added. "On a test made at the time we put the machines in, we had an actual increase in weaving production of 2% due to the elimination of bunches on the spooler and to the weaver's knot."

A new Barber-Colman warping development was described by a representative of the manufacturer as follows: "We have a warper that we run at a speed of 900 yd. per minute. In the warper which we have been selling for a number of years we revolved the package in the creel. In this new warper the package in the creel is stationary. For a number of years we rather took it for granted that it was necessary to revolve it. We thought it was not suited for over-end delivery, but apparently it is. In some cases this is true even on fancy work.

"In a warper the higher speed you are running, the more important becomes your losses from creeling. We have a type of creel so arranged that the creel girl puts in the next set of packages or cheeses while you are warping from one set. She creels it from the inside. Each side of the creel is double and may be reversed to bring the empty packages on the inside and the full packages on the outside. That is done very quickly. Putting the packages in the creel is done while beam is being run.

"Probably the tension in running the thread on the new warper is somewhat less than where we revolve the package. On fine yarns, such as 50s and 60s, the tension on the individual thread is around 1/10 or 1/12 oz.; and if you go up to coarser yarn, such as 18s to 20s, the tension will go up. The tension is due to aerial friction. The actual pull on the individual thread is extremely low. We think that uniformity of tension is of greater importance than actual tension; and of course if you run your warper without any drag in it, you can get a very high degree of uniformity."

A spinner reported that he has been running this system for some time and finds that on 60s yarn, 30,000 yd., the beam will run out in 50 min. with an average of nine stops; and on 52s hard twist, 27,000 yd., it will run out in 40 min. with an average of seven stops.

Elimination of Falls

Important in Accident-Prevention Program

*By H. T. Martin**

Fisk Rubber Co., Chicopee Falls, Mass.

REDUCTION of accidental falls may be very largely effected by closer coordination between the head and feet. In speaking of head, reference is made to the brain, eyes, and ears. When this coordination has been secured, the next steps are to set the house in order, anticipate the causes of falls, with their resultant injuries, and take precautionary measures.

Industry searches deeply for the causes of its accident and attempts to learn from the accumulation of all obtainable facts just what caused the fall; and if it can be definitely determined, corrective measures are taken. Some indication of the part played by falls in the industrial accident picture may be from figures taken from reports of the Industrial Safety Division of Massachusetts, Department of Labor and Industry. In the year 1929, for example, falls of persons represented 15.3 % of the total industrial accidents. This figure held second place in the causes of accidents, handling objects coming first. The National Safety Council is authority for the statement that 4,000 people are killed annually in industry by various falls, and many more are injured.

Slipping is given as the most frequent cause of falling, while falls from stairs are listed in second place. Wheras the above data presents proofs of the seriousness of this subject, in order to intelligently combat this type of accident, we must go further and determine the primary cause for the slipping—wet floors, ice, or what not. This knowledge must precede intelligent prevention work.

In the textile industry it is particularly true that slippery floors are one of the major causes of accidents. If floors must be scrubbed, and apparently this is so, there are ways of handling this job with a minimum of exposure to employees. In all probability it is an individual plant's problem. In one plant, it might be advisable to scrub the floors during hours when the employees are not at work; in another plant, possibly a small section of flooring could be roped off and scrubbed and not used until throughly dry; but in any event it certainly is a hazard that can be eliminated.

*Abstract of paper presented at 20th Annual Safety Congress and Exposition, Chicago, Ill.

Another common cause of falls in the textile industry is the presence of bobbins and spools on the floor. It is up to the overseer to see that the floor is kept free of all objects that do not belong there. In some plants it is necessary to oil floors to keep down the dust. Wherever this is necessary, the slipping hazard can be reduced by the use of ground quartz or other substance which produces an abrasive surface.

The first responsibility of management in a program intended to reduce the number of falls is to see that the equipment is safe. Ladders, stairs, scaffolds, platforms, overhead bridges, and staging come under this heading. The fixing upon some particular individual of the responsibility of keeping this equipment in good condition will go far to reduce the hazard involved.

Improved apparel on the feet is another cause of falls and other foot injuries in the textile industry. When one considers that many mill employees still go barefooted or wear felt slippers, high heels, badly worn heels, and even rubber heels, it is not difficult to understand why this cause may be a very prominent one.

Good lighting, both artificial and natural, is essential to prevent falls. This refers not only to the main operating room but to the out-of-the-way places, storerooms, passageways, and stair towers.

Good maintenance and proper disciplining will go a long way toward the prevention of falls. Running and horse-play should never be permitted in a plant. Control of these two factors is entirely in the hands of supervision. Absent-mindedness, inattention, day-dreaming—call it what you will—is responsible for many serious accidents. It is much more difficult to find a cure for this hazard than for some of those already mentioned. Example set by supervision will help; educational propaganda will help; in fact, anything that can be done to create any safety consciousness in the mind of the individual so affected is about the only remedy.

The greatest difficulty is in finding a receptive ear for this kind of instruction. We are all prone to consider ourselves very safe workers and unwilling to admit that the things that are happening every day to others could happen to us. This is illustrated by the story of two French boys who had spent the day hunting in the woods. Came nightfall, they were crossing a small stream; and in telling of the trip one boy said: "We started to cross the bridge over the brook. We got about halfway across. I hear big splash. I look quick for Pierre, and by gar it was me."

"By gar it was me!"

It has been truly said that all accidents are potential fatalities. What often sounds like a terrible accident produces only a minor injury, and what sometimes seems a minor accident results fatally. We must go deep enough, therefore, in our investigation to get the absolute fact as to what caused the fall; and then, without fear or favor, act. Management of industry has a tremendous responsibility in providing safe conditions for its people. This is made even more difficult today by the curtailment of expenses in all lines, but even greater is the responsibility of the supervisory staff representatives of management who must accept the blame or credit for accident experience. A good boss in any plant has very few accidents in his department.

Overseers' Round-Table

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

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Starting and Stopping Time

Editor, Overseers' Round-Table:

I HAVE to agree with Bill when he says that the operatives should not be made to think that they are just like the power, which is turned on and off when the whistle blows. I do think they should have their coats and hats put away at starting time, but I do not think it necessary for them to be actually at the machines.

Operatives should be allowed a few seconds before quitting time to wash up, for they are going to do it anyway when the overseer is not in sight. They can get their coats after the whistle blows, and in this way have a little privilege.

J. P. S.

Editor, Overseers' Round-Table:

I CAN'T help but agree with Bill about starting and stopping time. I have had 20 years' experience working in textile mills and for the first 10 I was a globe trotter. I worked from Maine to Oregon and during the 10 years I was in 62 textile mills. Believe it or not, I worked under some queer regulations. Some mills had iron-clad rules where others had none at all.

In the iron-rule plants operatives had to have their machines oiled and ready to start when the whistle blew, and could not leave until quitting time. The result was that they always wanted help. During my travels I wandered into one town and went to the mill. I walked in and wandered around, with no one stopping me, until I met the boss weaver. I asked him if he needed a weaver and he said that he had not hired a weaver in six years, but would give me a month's work as one of his regular weavers wanted to be out for that time.

This is the system they had in this 24 set plant: All the help were so interested in their work that it was no fault of theirs if they were not at the machines at starting time. Piece operatives were furnished with a bucket of warm water to wash up at 11:30 and 5:15. The man who delivered the buckets also filled the oil cans. Time workers had ten minutes to clean up. The excess production of this mill over the iron-rule mills more than paid for the man who waited on the help.

Since I have been an overseer I have tried to adopt such a system for the help so they will not think they are slaves. In one mill the system was working well, but the superintendent retired. The company got a textile school graduate who did not have any practical experience in handling help. He thought he was going to set the world on fire and that no one would interfere when he imposed his ideas of working conditions on the help, but the help went on strike for a new superintendent and won. It was the first strike the company ever had. Cooperation is the best policy and always wins out in the end.

C. E. S.

Editor, Overseers' Round-Table:

WHEN AN operative is first employed he is told explicitly that the hours per day are thus and so; starting at a definite

About Making Changes in

"WELL," Superintendent Chase inquired, "what's on the slate today? Have any of you a problem you want to bring up?"

"I think I have something we might discuss," Hank spoke up. "The other day I was talking with a friend of mine, Tom Hannah, who is an overseer in another plant, and he was red hot. It seems that things weren't going quite right in his department so he made a few changes that he thought would straighten everything out. A couple of days later he happened to be talking with the super and mentioned what he had done. Well, the super hit the roof. Said that Tom had no business to make changes without consulting him, and so forth. Tom got sore and told the super that he knew how to run his department, and that if he didn't he'd quit. It was quite a time until things were smoothed down."

"My point is," Hank continued, "that the super was right and Tom wrong. A department isn't run all by itself as a separate unit and if you make some changes in one department it may have some effects on the next. I think that the super should be advised of every change you make so that he can think it over and decide what is for the best interest of the company as a whole. If you let each overseer go ahead and change gears or anything else you might just as well throw up the sponge as far as any smooth flow of production is concerned. I told my friend Tom that he had no right to get sore when the super sailed into him, and that he was acting like a baby. Some overseers are so touchy about what they consider their 'authority' that they make me laugh."

"Before you lit into your friend," Bill replied, "I think you should have looked at the other side of the picture. I believe that the overseer has a perfect right to make any changes he sees fit in his department without consulting the super. If the changes don't work out, or if they raise hob in

ges in a Department

some other department, the overseer is plainly at fault and he should take it on the chin like a man. However, that does not affect his right to make changes. If everyone ran up to the super to tell him about every little thing the super would soon go nuts. My idea is that the overseer is responsible for his department and that he should assume all the responsibility possible and not bother the super. If he makes a lot of mistakes then he isn't worthy of the responsibility and he should step aside for someone who is. I believe, of course, that in a matter of very great importance it is often best to consult the super, but in the ordinary course of events my job is to turn out quantity and quality and the super isn't concerned with how I do it. He wants results, not consultations."

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Do *you* believe that the overseer has a right to make changes in his department without consulting the superintendent?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

time and continuing through to a definite time, with a fixed allowance for lunch. His very exceptance of these definite terms constitutes an agreement on his part that he will give his best efforts during this period to complete the tasks set by the employer. On such a basis, the conscientious worker does not ring in when the whistle blows, nor does he prepare to quit ahead of time and then wait around to ring out.

Even in those industries in which unusual conditions as to dust, dirt, etc., prevail, and where a five or ten minute preparation period is allowed at the beginning and end of each shift, it is difficult to prevent employees from starting late or quitting early. It seems to be a human failing.

Possibly if the wash rooms and lockers were placed outside the time clocks, so that a man would have to change before ringing in, and punch the clock before cleaning up at the end, some of the lagging would be prevented.

When all is said, the real answer lies with the supervisor. A good supervisor, with a fine sense of fair play and good judgment, will imbue his employees with a real desire to deliver full time and full effort in return for their wage. In fact, the so-called "lag" is a measure of the supervisor's ability. Z. E. SARGISSON, B. F. Goodrich Co.

Editor, Overseers' Round-Table:

IT IS a gratifying pride that an overseer feels when some official comes in his department at starting or stopping and finds all hands at their machines. It shows, in the first place, that this overseer keeps his hands under control, and secondly, that his department is being run under efficient leadership.

There is nothing that looks more disorderly than a room with the help packed at all entrances at stopping-time. If this procedure was carried out in the weave-room, for example, just picture in your mind the tremendous loss in production in one month alone, for the help left to itself, would soon be stopping their looms 10 or 15 minutes before time and wait to be the first out of the plant.

The writer has taken this into consideration and has found astonishing results when figuring if only five minutes are lost four times a day in the course of one running month.

HENRY F. HORN.

The Super's Qualifications

Editor, Overseers' Round-Table:

THE PLEASANT looking superintendent who has the respect of employees and stockholders and is connected with the successful textile mill of today is the man who does not know all the details of manufacturing. He has a general knowledge of all the processes, is a master of one that is important, and has an enviable reputation of accomplishment in this particular department.

Paramount to all this, however, must be his unquestionable knowledge of the fundamentals of management. Around himself he will gather department executives who are specialists in their line and humane in their conduct whom he will carefully observe and be ready to listen to. To these valuable men he will be able to clearly define the exact scope of their authority and responsibility to such a degree that there will be harmony and initiative at all times.

To my mind, the shortage of supers who are grounded in managerial problems is the greatest drawback to the textile industry of today. R. N. OB.

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Summary of Discussion on The Whistle

The discussion on the question of whether operatives should be required to be at their machines when the whistle blows in the morning, and remain there until quitting time, or whether there should be time allowed for preparing for work and for washing up, developed three viewpoints. A strict rule that operatives should be at their machines the full working time was advocated by 49% of the replies. Another 26% stated that operatives should be at the machines at starting time, but should be allowed a five minute period in which to wash up at stopping time. The remaining 25% believed that the production gained by strict enforcement of such a rule would be more than offset by discontent among workers.

A Commission Weaver Looks at the Silk Industry

By Ray E. Ballard

Ballard Silk Co., Inc., Binghamton, N.Y.

SOME time ago it was possible to make money in the silk game, whether it was manufacturing or commission weaving. Commission weavers figured that it was worth so much to produce the fabric from the raw to the greige plus a fair per cent for the effort involved. They were paid this price, and in turn were able to hire skilled help who could produce the merchandise as it was required. Then, commission weaving was attractive.

There was a time when the manufacturer knew how much it cost to produce a piece of goods so that it would show him a fair profit and enable him to occupy a social position of which he was deserving. As a result, work which he gave out to commission weavers was paid for proportionately. Today, with the bottom out of the market and the manufacturers cutting each others' throats, the commission man finds himself in a very bad state of affairs. In order to keep his looms running and his organization intact he must cut prices to the minimum and then deduct a good per cent apparently for the privilege of working in a steady direction toward bankruptcy.

The man who made the goods put them on the market for sale at cost plus the necessary addition; furthermore when the buyer wanted merchandise he paid for it as the manufacturer so designated. At the present time the buyer wants the goods regardless of the cost and says that he will pay so much; if the maker will not sell for that figure he loses the order to his competitor who has underbid him, perhaps by a sixteenth of a cent. If the manufacturers would *all* refuse to sell at less than cost plus a reasonable profit, in time the cut-throat selling would be pretty well cleaned up. It is true that no one would make a "killing" but every one would be able to have a fair revenue—even the commission men. The cut-throat tactics have so pitted the manufacturers against one another that the idea of co-operation is unheard of and the buyer has control of the market. The man who buys, who possibly doesn't know a sweepstick from a friction band, dictates the worth of the manufacturer's knowledge to him.

Quality, always important, was never so strictly regulated as it is now. Whole pieces have been returned and charged off because of some small minor defect that may have been unavoidable. It has been said that a buyer, after having placed an order, would find a firm who would do the job a little cheaper; so after receiving a few pieces from the original manufacturer the buyer would find a few minor flaws in them and cancel his first order. The manufacturer, commission or otherwise, knows from actual contact and experience what a unit of looms will do. Every day he has at his finger tips the machinery and labor conditions of his plant. How can a man who deals only in finished goods know the intricate details of manufacture sufficiently to tell what can be made, how much, and at what price?

Manufacturers complain about the buying power of the public, still when they give out work to their commission weavers they make the price so low that the plant man must reduce wages. It is now nearly to the point where the individual weaver looks at his pay after the week is over and wonders whether the boss is paying him or he is paying the boss! The worker is naturally becoming depressed and sullen.

The source of revenue for a commission weaver is *yards*. The production of as many yards as possible determines the value and earning ability of his plant. The people who give orders to commission weavers want the work done at a low figure. These people are also complaining about over-production. They do not seem to realize that the commission weaver has to eat and sleep somewhere the same as they themselves, and that when they cut the price they force the commission man to put on two and in some cases three shifts in order to get yards enough to meet necessities of life. Hence one phase of overproduction.

To those who may read this, I can offer no satisfactory solution; only a few of the prevailing facts are presented. But, unless legitimate manufacturers and commission weavers form an alliance and adhere to it, to what end will this continual price warfare lead, except to ruin?

"But of Course Textiles Are Different. . . . ."

Add Business Heroes: The brick manufacturer who took his underburned rejects; branded them "Airedale" Brick, and sold them, on a style appeal, at $3 more per thousand than regular brick.

▸ Employment Stabilization Stressed by Robert West

"The problem of equalizing from week to week and from month to month the employment of labor, of providing steady employment, is a very difficult one to solve, but it must be solved," declared Robert R. West, vice-president of the Riverside & Dan River Cotton Mills, Danville, Va., in an address before the Lions Club in that city, March 2.

"Great efforts have been made to meet this question," Mr. West continued, "and these efforts are already bearing fruit. Many mills formerly working night and day have given up that practice, while still others have announced their intention of doing so. That, to my mind, is one of the best things that has been done in our industry."

In his closing remarks, Mr. West said: "I believe every one of you will agree that the biggest problem ahead of us is that of providing steady employment. If I am not mistaken, this will prove one of the greatest aids in learning how to swing through the present depression."

▸ Spring Schedule of S.T.A. Meetings

Plans for spring meetings of the various divisions of the Southern Textile Association were announced this week by Walter C. Taylor, secretary and treasurer of that organization. The dates for other meetings will be announced later.

The Dyers-Bleachers-Finishers Division will hold its spring meeting at the Hotel Charlotte, Charlotte, N. C., April 2. Plans for this meeting include a Dutch luncheon at which several papers will be presented, followed by a round table discussion, while the evening session will consist of a banquet with several entertainment features. Paul F. Haddock, of Charlotte, chairman of the division, will be in charge.

The Eastern Carolina Division will hold its meeting at North Carolina State College, Raleigh, N. C., April 15. This date has been arranged so that members of the association may have an opportunity to attend the annual textile exhibition and style show.

South Carolina members of the association will meet in Columbia, S. C., April 22, for the purpose of creating one or more divisions among the membership in that State. Part of the day will be devoted to the business session, while the balance will be used for discussion of card room problems. The committee of arrangements for this meeting is composed of H. H. Iler, Greenville, S. C., Fred L. Still, Greer, S. C., and J. O. Corn, Columbia, S. C.

▸ Points Two Roads To Rayon Stability

There are two ways of holding rayon prices steady in the face of the present drop in sales, states the latest issue of Textile Organon, published by Tubize Chatillon Corp. The problem and possible solutions are discussed as follows:

"Briefly, if viscose rayon prices are to remain steady, the producers are faced with at least the two alternatives of lowering their production schedules to balance their sales or of increasing their sales to balance their production. The first alternative would be the simplest

Jack Card on the Trail of a Trend

Editor, TEXTILE WORLD:

I heard a bit of news the other day which, on the surface, may not seem like front-page stuff but which, the more I think of it, strikes me as pretty important.

A southern cotton manufacturer has decided to spend 80% of his time, during the next several months at least, at his selling offices in New York. He has even given up his "uptown office" in the southern city where his plant is located and, when he goes there for "the other 20%" of his time, will make the mill his headquarters.

Isn't that a striking example of the new appreciation of the sales factor among textile manufacturers?

JACK CARD.

way of dealing with the situation. Thus whereas the present rate of production may be 75%, the new schedule would call for such a reduction as would not only balance sales but which should, even better, tend to reduce stocks.

"The announcement on Feb. 26 by a large rayon producer that his company intended to reduce production by 10% immediately, and by an additional 10% later if necessary, in order to balance production with sales was a most constructive step. The rest of the producers will be derelict in their duty to the industry and themselves if they do not follow suit and set their own houses in order.

"The second plan of increasing sales to balance production is more difficult, but entirely feasible. In this country, during the past decade especially, industry has devoted so much of its attention to production in all of its ramifications, that the sales aspect of its product has been sadly neglected. If the rayon producers work on the reasonable hypothesis that the people in this country can consume far more than an average of 1¼ lb. of rayon each, even in time of depression, then they might examine their general merchandising policies to see how this could be effected."

▸ Morris Garfunkel Starts New Cloth Conditioning Company

Morris Garfunkel has withdrawn his interest from the American Shrinkers Corp., and has organized the Morris Garfunkel Conditioning Corp., located at 370 West 35th St., New York, under his own direction, as president. His son, Leonard Garfunkel is treasurer and technical supervisor. John Lufrano, who has been closely affiliated with Garfunkel's interests for the last 23 years, will be the secretary and general superintendent. Charles Lamby will be in charge of the examining, Vincent of the adjusting, Bill Kruse in the shrinking and conditioning and Joe Pan in the receiving and shipping departments.

Parisian Fabric Houses Feature Rayon in Their New Fabrics

By F. de Francia
Du Pont Style Service, Paris

THE leading fabric houses, in their presentations this year, have emphasized rayon and rayon-containing materials. This is not surprising in view of the fact that outstanding successes in recent months have been such materials as Peau d'Ange, Sinellic, Satin Boilly and Jersey Boilly, Diable Bleu and Crepe Janigor, sponsored by the prestige of such dressmaking houses as Schiaparelli, Patou, Poiret, Molyneux, Maggy Rouff, Marcel Rochas and others. In searching for other fabrics which would duplicate the success of these favorites, some most interesting presentations have been made.

For instance, Bianchini has developed an interesting new novelty fabric called Beuilspor, which is an all-rayon fabric giving the effect of woolen. It is often used in tartan designs and is especially designed for sports dresses. Another outstanding fabric in this collection is Gypsiane, a silk-and-rayon material of a morocain aspect, which is particularly used for pajamas and beach costumes. Rayon flamengas are prominently featured, among them being Flamisol, the success of the season. For spring dresses, a new material called Troubadour, which is a combination of wool and rayon, is highly sponsored by all the leading dressmakers. Among Bianchini's dull crepes is Crepe Turcal, a new rayon crepe, which has a very spongy surface. Satin Coufer, a new dull satin made entirely of rayon, has the aspect of doeskin or antelope and is prominently featured in leather shades. Among the special materials for evening wear is the new Alaska Satin, which is entirely made of rayon.

Rayon plays a more important part than ever in the Rodier collection. Sinellic, which was an outstanding success last year, is the base of many novelty fabrics in his new collection. Among these are Torsinellic, which can be crisped, twisted and embroidered, and novelty weaves called Granisinellic, Lozysinellic and Cordouroysinellic, which are very effective. For bathrobes and beach wear, Rodier has developed a line of jerseys called Aquinaia and Aquinecla, which have an addition of rayon threads. One of the new rayon materials for summer wear is Linecla, which Rodier has developed in his new Flax Blue.

Chatillon and Mouly Roussel have brought out Crepe Eureka, an all-rayon material especially created for afternoon wear. Several kinds of pique de soie, made entirely of rayon in both plain and printed designs of Colonial inspiration, are featured. A novelty in toile de soie is the Olympic, a new rayon material resembling Rodier's Sinellic. Another new development in this collection is Artimiero, a rayon fabric similar to Micromaille, designed especially for dresses, sports costumes and women's coats.

Meyer, whose new collection consists principally of woolens, has used rayon in many interesting ways to create novel effects and to brighten and enhance the weave.

▸ Leather Belting to Be Sold by Thickness Instead of Weight

The American Leather Belting Association has decided that, for the greater protection of the consumers of leather belting, it should establish and sell this commodity by specifications of thickness instead of weight, thereby discarding the old weight terminology of "ounces per square foot," which may be varied by the mere addition of weighting materials to the leather and does not necessarily always represent a differential in transmission values. This decision was reached after the association had canvassed all manufacturers of belting throughout the country and received 81 replies all voting for the change. Therefore the movement can be considered as having the endorsement of the entire industry and is now in effect.

This is an interesting and progressive move for the purpose of establishing higher standards for a production that has been sold by weight for many years. Inasmuch as leather-belting prices are based on thickness, the simplicity and common sense of this change insure the approval of both manufacturers and users of leather belting.

The thickness specifications now in effect for first-quality leather belting are as follows: medium single, 10/64 to 12/64 in.; heavy single, 12/64 to 14/64 in.; light double, 15/64 to 17/64 in.; medium double, 18/64 to 20/64 in.; heavy double, 21/64 to 23/64 in. All thicknesses just given are average thicknesses in inches and should be determined by measuring 20 coils and dividing this value by the number of coils measured. In rolls of belting containing less than 20 coils the average thickness should be determined by measuring one-half of the total number of coils and dividing this value by the number of coils measured. The classification of "light single" has been eliminated entirely. Uniformity: No point in either single or double belting shall be more than 2/64 in. thicker or more than 2/64 in. thinner than the average thickness. The second- and third-quality brands of each manufacturer bear the same relative thickness to the manufacturer's first-quality grades that they did in the past under the old specification.

NEWS about MEN

Robert L. Jenks, of Pawtucket, R. I., who succeeds **Henry L. Tiffany** as president of Kilburn Mills, New Bedford, Mass., is in addition a director of Altavista (Va.) Cotton Mills, Inc., Cornell Mills, Fall River; Dartmouth Mfg. Co., New Bedford; Manville Jenckes Co., Woonsocket; Pilgrim Mills, Fall River; U. S. Bobbin & Shuttle Co., Manchester, N. H.; Woonsocket (R. I.) Machine & Press Co., Inc. Mr. Jenks is also a director of several well-known banks, insurance companies and loan societies, and is already a member of the board of directors of Kilburn Mills.

K. P. Lewis, an executive of Erwin Cotton Mills Co., West Durham, N. C., was elected president of the Erwin Yarn Co., Ledger Bldg., Philadelphia, at a meeting of the directors held in Durham, March 1, to succeed the late W. A. Erwin. **Thos. H. Webb,** an officer of Locke Cotton Mills Co., Concord, N. C., was elected vice-president and **L. H. Garrett,** of Philadelphia, was elected secretary treasurer of the yarn company at the recent meeting.

J. Arthur House, president of the Guardian Trust Co., Cleveland, Ohio, a director of the Industrial Rayon Corp., Cleveland, and a director of the Standard Textile Products Co., New York, has been reappointed a member of the Federal Advisory Council, of the Federal Reserve Board.

John P. King has been reelected president of Worth Mills, Fort Worth, Tex.; Harding Tilton & Co., Boston, have been retained as selling agents; **Charles L. Harding** has been reelected vice-president; and **H. W. Durant,** of Boston reelected secretary. Others on the board of directors are: **G. H. Clifford, William Drinkwater** and **W. S. Fulton,** all of Boston, with **G. H. Connell, W. C. Stripling** and **M. King,** all of Fort Worth, trustees. **J. G. Bennette** is manager of the plant.

L. W. Robert, Jr., president, Robert & Co., Inc., Atlanta, Ga., industrial architects and engineers, has been elected to the board of directors of the American Airways, Inc., which is the operating unit of the Aviation Corp. of Delaware, with extensive passenger lines in the United States.

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Parker Margeson, vice-president of Phoenix Hosiery Co., Milwaukee, Wis., and **Max A. Freschl,** vice-president of Holeproof Hosiery Co., Milwaukee, have been elected directors of Full-Fashioned Hosiery Manufacturers of America, Inc., New York.

George A. Jagerson has been elected a director of the Jersild Knitting Co., Neenah, Wis., succeeding **W. G. Brown.** All other officers of the concern have been reelected.

Walter C. Taylor, secretary of the Southern Textile Association, Charlotte, N. C., recently delivered an address to the junior and senior classes at Clemson College (S. C.) Textile School. He discussed new mechanical developments in the textile industry and the possibilities for more practical textile research.

Val R. Evans, who has been with the George F. Webber Co., Detroit, Mich., for 20 years, is treasurer of the reorganized company of same name and address.

George M. Kerr has been elected assistant treasurer and a director of Charles J. Webb Sons Co., Philadelphia, filling the vacancy caused by the death of Andrew S. Webb. Mr. Kerr has been connected with the company for many years in various departments.

Frank E. Curran, treasurer of the Mock-Judson-Voehringer Co., Greensboro, N. C., has been elected vice-president of the Sedgefield Country Club, near Greensboro.

Herbert Wilkinson, former manager of the Southbridge (Mass.) Printing Co. has resigned.

Irving C. Valentine, general manager of the New England Knitting Co., Winsted, Conn., has been elected president of the Winsted Manufacturers Association.

George R. Horton, director of advertising for the Earnshaw Knitting Co., Newton, Mass., has resigned.

Edgar Tegar, who has resigned as superintendent and designer at Fordyce Woolen Mills, Inc., East Brady, Pa., has accepted a similar position with Peter Graff & Co., Inc., Worthington, Pa. **William Starling,** resigned as overseer of carding and spinning and also went to Peter Graff & Co.

Frederick W. Brown has been appointed sales manager of the Bower Mill, Inc., Lewiston, Me., and will be in charge of the New York office at 40 Worth St.

Edward W. Smith, assistant agent of the Wauregan (Conn.) Co., has been elected president of the Eastern Connecticut Mills Association; **James J. Brady,** superintendent of the Bay Co., Versailles, Conn., first vice-president; **Clarence Taylor,** designer at Aldrich Bros. Co., Moosup, Conn., second vice-president; **Harry Greene,** cotton classer at Quinebaug Mills, Danielson, Conn., and Wauregan Co., third vice-president; **Edgar M. Kennedy,** master mechanic at Bay Co., fourth vice-president; **William Allen,** superintendent at Baltic (Conn.) Mills, fifth vice-president.

A. C. Gregg, former superintendent of the Belmont (N. C.) Hosiery Mills has been appointed superintendent and production manager of the Terry Hosiery Mills, High Point, N. C.

Walter M. Diener, superintendent of the Spring City (Pa.) Bleach & Dye Works, and Mrs. Diener, have returned from a Mediterranean cruise.

Textile Calendar

Textile Operating Executives of Georgia, Semi-Annual Meeting, Georgia School of Technology, Atlanta, Ga., March 18, 1932.

Silk Association of America, Annual Meeting, 468 Fourth Avenue, New York, March 23, 1932.

Southern Textile Association, Dyers-Bleachers-Finishers Division, Spring Meeting, Hotel Charlotte, Charlotte, N. C., April 2, 1932.

Cotton Manufacturers' Association of Georgia, 32nd Annual Convention, Atlanta-Biltmore Hotel, Atlanta, Ga., April 5 and 6, 1932

National Association of Hosiery and Underwear Manufacturers, Annual Meeting, Commercial Museum, Philadelphia, Pa., April 14, 1932.

Knitting Arts Exhibition, 28th Annual Show, Commercial Museum, Philadelphia, April 11 to 15, 1932.

North Carolina State College, Annual Textile Exhibition and Style Show, Raleigh, N. C., April 15, 1932.

Southern Textile Association, Eastern Carolina Division, Spring Meeting, N. C. State College, Raleigh, N. C., April 15, 1932.

Southern Textile Association, South Carolina Group, Organization Meeting; Carding Discussion, Columbia, S. C., April 22, 1932.

Southeastern Section of American Association of Textile Chemists and Colorists, spring meeting, Auburn, Ala., April 30, 1932.

Textile Forum, N.A.C.M., General Meeting for agents and superintendents, Chamber of Commerce Bldg., Boston, Mass., April or May, 1932. (Date is to be announced.)

Second National Cotton Week, May 16 to 21, 1932.

American Cotton Manufacturers Association, annual convention, Atlanta-Biltmore Hotel, Atlanta, May 20-21, 1932.

National Association of Woolen and Worsted Overseers, semi-annual meeting, Rocky Point, R. I., May 21, 1932.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 17 to 22, 1932.

Charles van Thompson, formerly an accountant for the Goodyear Clearwater Mills, has been made cost accountant for the three Georgia plants at Atco, Cedartown, and Rockmart, according to announcement by **I. A. McDaniel** in charge of office personnel. **Gordon Powell,** former paymaster at the Atco plant succeeds **R. F. Ford** as chief clerk at the Rockmart mill. Mr. Ford has been transferred to the Atco division to replace **R. E. Price** who has returned to the main office at Akron. **Paul C. Franklin** has left the Rockmart mill to become assistant cost accountant at Atco, Ga.

J. **P. Lane** has been promoted to overseer of the cloth room at the Spencer Corp., Spindale, N. C., to succeed **W. A. Owings,** who recently resigned to accept a position with Dunean Mills, Greenville, S. C.

John H. Cranford has been promoted from assistant superintendent of the carding department of the Clinton (S. C.) Cotton Mills, to superintendent of the carding department, succeeding **J. E. Shaw,** who has resigned.

W. G. Hamilton, former superintendent of weaving at the Wyandotte Worsted Co., Waterville, Me., is now superintendent of weaving at the Cleveland Worsted Mills Co., Cleveland, Ohio.

J. J. Hyder, formerly overseer of No. 1 weave room at the Rhodhiss (N. C.) Mills Co., has accepted a similar position at Consolidated Textile Corp., Shelby, N. C.

Erwin C. Taft has taken charge of finishing at the Yale (Mich.) Woolen Mills again after an absence of two years.

Charles P. Gulick, president of the newly organized Sulphonated Oil Manufacturers Association, national in scope, who has recently been elevated to presidency of National Oil Products Co., Inc., Harrison, N. J.

Kearns J. Whalen has succeeded **Joseph L. Manning** as overseer of dyeing at the Lymansville (R. I.) Co.

G. E. Townsend has accepted a position with Piedmont Print Works, Greenville, S. C. He has been doing postgraduate work at Clemson College (S. C.) Textile School.

Victor Johnson, former dyer at the Coe Woolen Co., Worcester, Mass., has resigned. He will be succeeded by **Herbert Holgate,** formerly with the American Felt Co., Picton, N. J.

B. H. Bowen, until recently overseer of weaving at the Alice Mfg. Co., Easley, S. C., has been promoted to the position of superintendent succeeding the late G. L. Austin who died recently.

L. W. Philbrook is now overseer of soaking and winding at the United Rayon Mills, Fall River, Mass.

W. B. Grier has accepted the position of overseer of carding and spinning at the Franklin Mills, Greer, S. C. He was formerly at the Victor Plant, of the Victor-Monaghan Co., Greer.

Prentice Raiford, formerly employed by the Locke Cotton Mills Co., Concord, N. C., has accepted the position of overseer of finishing at the Hannah Pickett Mills, Rockingham, N. C.

John W. Gledhill, former overseer of finishing at the Homestead Woolen Mills, West Swazey, N. H., has resigned. **A. D. Dudley** has become overseer of dyeing and finishing.

George Burke, former overseer of finishing at the Slingsby Mfg. Co., Brantford, Ont., Canada, has taken a similar position with the Thayer Woolen Co., North Oxford, Mass.

Bernard S. Hudson, formerly assistant dyer at Somersville (Conn.) Mfg. Co., is now overseer of dyeing at the Rocky Gorge Woolen Co., South Berwick, Me.

Cyril Doucette, former overseer of weaving at Dwight Mfg. Co., Somersworth, N. H., has resigned.

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Obituary

Dr. Arnold Buffum Chace

Dr. Arnold Buffum Chace, well-known Rhode Island cotton manufacturer and chancellor of Brown University, died Feb. 28 in his 87th year. He was born in Valley Falls, R. I., and graduated from Brown in 1866; he continued his studies at the Lawrence Scientific School at Harvard, and at l'Ecole de Medecine, Paris. Upon his return to this country he taught chemistry and physics at Brown a year. Dr. Chace gave up a career of mathematics because of his eyesight, and went into his father's textile plant. He was elected treasurer of the Valley Falls (R. I.) Co. in 1869, holding that position until the company was absorbed in May, 1929, by the Berkshire Fine Spinning Associates. Dr. Chace was also a president of the Westminster Bank of Providence, held directorships in more than half a dozen fire insurance companies, and was vice-president and director of the Old Colony Cooperative Bank, Providence. He was author of several books on mathematics, and held an honorary degree of Doctor of Science.

Alfred R. Heritage

Alfred R. Heritage, superintendent for many years of the Sydney Cotton Mills, Graham, N. C., until the company was dissolved about two years ago, died recently at the age of 68 years.

Matthew Hollings

Matthew Hollings, until eight months ago in charge of the worsted division of the Peace Dale (R. I.) Mfg. Co., a branch of the M. T. Stevens Co., died Feb. 29 in Woonsocket, at the age of 70 years. He was born in England and entered the worsted yarn business at an early age, later becoming partner in Hollings & Butterfield, manufacturers of worsted yarns in England. When the partnership was dissolved in 1906, Mr. Hollings came to this country and accepted a position as superintendent of the Crescent Worsted Mills, Concord, N. H. Soon afterwards he went to Peace Dale and took charge of the worsted division of the Peace Dale company.

Avon Barnes

Avon Barnes, president of the Allentown (Pa.) Bobbin Works, and chairman of board of the Allentown Trust Co., died March 4, at the age of 76 years. He was an organizer of both these institutions.

A. C. Farnam

A. C. Farnam, founder of the Star Knitting Co., La Crosse, Wis., died suddenly Feb. 25 at the age of 74 years. Mr. Farnam founded the company in 1888 and served as its president until his death. He is survived by his widow, two daughters and a son.

Edward S. Greene

Edward S. Greene, president of Edward S. Greene Corp., textiles, New York, which he organized about four years ago, died last week at his home in Brooklyn. He was a member of the Brooklyn Chamber of Commerce, and the Presbyterian Church. He is survived by his widow, a daughter and son.

NEWS about MILLS

Cotton

Ashland Corp., United Merchants & Manufacturers, Inc., Jewett City, Conn., closed its plant there March 1, when it failed to reach an agreement over taxes with the town of Griswold. The latter refused to abate $15,000 taxes due. Officials stated it would be closed until they could see how the mill could be operated profitably. Property was assessed $572,124 by Griswold and $542,124 by the borough of Jewett City. The company employed 500 with a weekly payroll of $9,000.

Greylock Mills, Mill B, Williamstown, Mass., of Berkshire Fine Spinning Associates, Inc., Adams, Mass., resumed operations March 3 with full time schedules anticipated in three or four weeks. This unit of the **Berkshire Fine Spinning Associates, Inc.,** had been closed 21 weeks.

Clark Thread Co., Newark, N. J., has arranged for an insured retirement program for employees at its various mills. Under the plan, retirement incomes will be paid to men beginning at age of 65 years, and to women, at 60 years of age, with accident and health benefits in the meantime.

Cannon Mills, Kannapolis, N. C., added 106 employees to their payroll during the week ending Feb. 27, according to a report received by the American Legion, which organization is sponsoring a drive to return one million men to work.

***Green River Mfg. Co.,** Tuxedo, N. C. Word has arrived from receivers, W. M. Sherard and T. M. Watson, that the receivership is an operating one and that they expect to bring production to capacity within reasonable length of time The mill is specializing on fine combed yarns from 60s to 100s, natural and mercerized.

Mt. Hope Mills, Inc., Warren, R. I., which have not been in operation for some time, have been sold for $25,000 to the Madison Co., Providence. The 1930 and 1931 taxes amount to $16,000. Wm. C. Johnson, of Providence, who was president of the company, has said that he took the plant as an experiment but received little cooperation from the town of Warren. The sale included property and cotton yarn equipment.

Chiquola Mfg. Co., Honea Path, S. C., will begin superstructure for a new one-story mill extension, 60 x 89 ft., for which general contract recently was let to the Gallivan Construction Co., Greenville, S. C.

***Eureka Cotton Mills,** Chester, S. C., have awarded contract to Potter & Shackelford, Inc., Greenville, S. C., for three plant additions. Machinery now located in the Springstein plant within the city limits, will be transferred to the Eureka plant as soon as additions are completed, in about six months. Plans were prepared by J. E. Sirrine & Co., Greenville, architects and engineers.

**Indicates previous mention of project.*

Wool

Tingue Mfg. Co., Seymour, Conn. Louis M. Rosenbluth has been named receiver under bond of $50,000 by New Haven Superior Court.

Dedham (Mass.) Mills, of M. J. Whittal Associates, Ltd., Worcester, Mass., have closed indefinitely.

Davidson Woolen Mills, Eaton Rapids, Mich., are running on a 24-hr. production schedule, giving employment to about 60 operatives, and expect to hold to this basis for an indefinite period.

Forstmann Woolen Co., Passaic, N. J. Plans are being completed for a boiler house at the Garfield plant, and another at the Passaic plant, replacing present structures and equipment. Some old machinery at the mills has been scrapped including looms which have been replaced with new ones. These new looms will not reduce the personnel.

Philadelphia Yarn Corp., Silver Creek, N. Y., has been organized with a capital of $50,000, to establish and operate a plant for the manufacture of woolen yarn. F. G. Anderson, local attorney, is one of the principal incorporators.

***Alexander Smith & Sons Carpet Co.,** Yonkers, N. Y., has begun excavations for a one-story brick addition to power plant on Saw Mill River Rd., estimated to cost about $30,000, with equipment. It will be used as a turbine house; a 4,000 kw. turbo-generator unit of Westinghouse type will be installed. A. V. Bekay, New York, is architect.

Red Hill (Pa.) Rug Co., Inc., resumed operations Feb. 29 on a full time basis with complete working force, after being closed for two months.

Bowditch Mills, Inc., Pascoag, R. I., have been sold through Henry W. Cooke Co., to Frederick L. Jenckes, former president of the **Manville-Jenckes Co.,** Pawtucket, R. I. The plant includes a two-story stone building 45 x 160 ft.

Silver Lake Worsted Mills, Inc., Providence, R. I., organized a year ago, which leased the **Gaunt Worsted Mills, Inc.,** has obtained an order for the sale of the property under attachment. Arthur Gaunt, secretary of the Gaunt Mills, in business for some years, headed the Silver Lake company also.

Knit

Wilke Knitting Mills, Inc., Waterbury, Conn., has been chartered with a capital of $50,000. William, Morris, and Robert Kosersky, are incorporators.

Campbell Silk Hosiery Mills, Lambertville, N. J. Proposed sale of property of this company by the receivers has been adjourned by the U. S. District Court, in effort to secure higher bids than those which have been submitted. A bid of $50,000 is said to have been made for the assets. Hervey S. Moore, Trenton, N. J., and James L. Rankin, Chester, Pa., are receivers.

Vanguard Knitted Sportswear Mills, Inc., Brooklyn, N. Y., have been organized to manufacture knitted novelties. Mill is at 204 Varet St.

Beauknit Mills, Inc., Fort Plain, N. Y., have started operations with 10 women; when they have learned operations more workers will be added until production of the Brooklyn plant has been absorbed at Fort Plain.

Elizabeth City (N. C.) Hosiery Co. is installing 340-needle Scott & Williams machines. It is also installing lace attachments on its full-fashioned hosiery machines.

Keller Knitting Co., Cleveland, Ohio, recently organized, as reported in TEXTILE WORLD, will be located at 4815 Lexington Ave., Cleveland.

Bell Knitting Mills, Allentown, Pa., have leased the Hazeltine Bldg. at Jonestown, Pa., and will occupy for a branch mill for manufacture of knitted specialties. Machinery will soon be installed. Employment will be given to about 75 persons for initial operations.

Westlawn Knitting Mills, Intervilla, Pa. Fink Construction Co., Reading, Pa., is completing annex to plant which will add about three times as much floor space. The plant was established two years ago. It has recently been running on a day and night schedule.

***United Globe Knitting Mills, Inc.,** Philadelphia, will be sold at public auction. Receivers have been unable to run the business at a profit since Dec. 8, during the 90-day probation period, and have received permission from the court for the sale.

***Bassett (Va.) Knitting Mill, Inc.** The newly installed boiler and the doubling of the entire dye house equipment, with some additions to mill, will practically double production.

Silk

National Spinning Co., New Bedford, Mass., a new corporation, has taken over the plant and equipment of the **National Spun Silk Co.** The affiliation of the latter with **General Silk Corp.**, New York, will not be maintained. James Conway, who was assistant treasurer of General Silk Corp., will be in charge of corporate activities of the new company at New Bedford and he has announced that executive offices and purchasing department will henceforth be located at the mill with only a sales office in New York.

Odeon Fabrics Corp., Paterson, N. J., recently organized with a capital of 1,250 shares of stock, no par value, to operate a local silk mill, will be represented by Harry L. Schoen, 45 Church St., Paterson, attorney. David Kwiat and Morris Sharf, Paterson, are the principal incorporators.

*__Champlain Spinners, Inc.__, Whitehall, N. Y. Production is expected to start by May 1.

Shindel Silk Corp., Hughesville, Pa. Receivers for this company have reopened the mill after a shutdown for about a year and will continue production until further notice, giving employment to about 100 operatives.

Reading (Pa.) Silk Throwing Corp., capitalized at $30,000, has been granted a charter. George L. Roller, 842 Weiser St., Reading, is treasurer. Other incorporators are Joseph S. and Edward J. Lerch.

Rayon

American Glanzstoff Corp., Elizabethton, Tenn., will curtail output a small percentage to keep production in line with sales, to prevent any undue accumulation of yarns.

DuPont Rayon Co., Old Hickory, Tenn., is completing an enlargement program at local power plant, for increased capacity. DuPont Construction Co., Wilmington, Del., an affiliated organization, is in charge.

Finishing

Schulze Dyeing Co., Inc., Spring Valley, Reading, Pa., is to be sold. Property includes one-story modern brick dyeing plant fully equipped, and adjoining real estate.

Miscellaneous

Asbestos Mfg. Co., Huntington, Ind., is increasing production schedule and has added about 30 employees to the working quota. It expects to add about 50 more operatives at an early date.

Elliott-Granite Linen Corp., Wortendyke, N. J. Frank D. Stead, Hawthorne, N. J., has been appointed receiver for this company, in bond of $10,000. Plans are under way for a reorganization.

*Indicates previous mention of project.

Edwin H. Fitler Co., Philadelphia, has filed plans for a one-story addition to mill on the State Rd., for which general contract recently was let to the Austin Co., Philadelphia.

H. Harrison & Co., 605 South Second St., Philadelphia, manufacturers of bedding, have leased the four-story building at 247 Market St., and will occupy for a new plant.

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New Books

ORNAMENTATION AND TEXTILE DESIGN; By Alfred F. Barker, M.Sc., F.T.I.; Frederick A. Stokes Co., New York City; $5.

No attempt is made in this volume to deal in a technical or systematic manner with the problems involved in textile design. Rather than this, it treats the inspirational and historical background of textile design in an interesting and competent manner. There are thirty-one pages of text treating the development of design, and 95 pages of illustrations portray the connection between textile design and various floral and architectural patterns.

KNITTING TRADE DIRECTORY; John Heywood, Ltd., Manchester, England; 2 shillings.

This pocket-size booklet provides a complete list of the firms in the United Kingdom engaged in machine knitting, and is indexed in convenient form.

ELEMENTARY TEXTILE DESIGN AND FABRIC STRUCTURE; By John Read, F.T.I.; Longmans, Green & Co., New York City; $2.

This book has been prepared for the use of students in the elementary grades of fabric structure and textile design, and is particularly useful for those who are interested in cotton fabrics. It deals with the fundamental weaves requiring one warp and one system of filling, and it is intended that it shall afford an opportunity for practice in square-paper designing. There are 95 well-illustrated pages.

WOOL QUALITY; By Dr. F. G. Barker, Ph.D., D.I.C.; Empire Marketing Board, London, England; 21 shillings.

This 283-page volume probably offers the most complete discussion of the wool fiber ever placed under one cover. The chemical, biological, physical and technical aspects of this fiber are all completely discussed. The purpose of this work is to so thoroughly study the wool fiber itself that the establishment of the definition of quality will be facilitated.

COTTON FACTS; Shepperson Publishing Co., New York City; $1.50.

This is a statistical booklet dealing with the American cotton crops. The world's consumption of cotton, imports and exports of cotton to and from the United States, price comparisons of cotton over a period of years, number of cotton spindles in various sections of this country and in other countries, and a wide range of other statistical information is provided.

Business Literature

Boiler, C-E Type V.M. Combustion Engineering Corp., New York. Illustrated leaflet describes this new boiler which is of the bent-tube type. It is especially deditions and where the headroom is low.

Color Card. General Dyestuffs Corp., New York. New sample card shows a selection of mode shades on fabrics of wool and rayon with white acetate silk effect. The dyeing procedure is outlined.

D. C. Motors. Reliance Electric & Engineering Co., Cleveland, Ohio. A special bulletin prepared for the new, large, type T d.c. motors includes details of construction, cross-sectional drawings, dimensions, and table of ratings. The motors range in size from 100 hp. at 200 r.p.m. to 350 hp. at 850 r.p.m.

Electrical Review. Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. The engineering achievements of 1931 are summarized in an interesting manner in a well-illustrated, 40-page booklet.

Expansion Joints. E. B. Badger & Sons Co., Boston. Leaflet describes the new corrugation, now a part of the Badger self-equalizing expansion joint. Other features of this joint are described briefly.

Gearmotors. Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. Gearmotors, consisting of speed reducers compactly combined with induction motors into general-purpose unit drives, are the subject of this publication. Information on the applications, details of construction, a listing of sizes and speeds, and dimensions are included.

Hydraulic Turbine. James Leffel & Co., Springfield, Ohio. A brief description of the accomplishments of the hydraulic turbine manufactured by this company has recently been published. An efficiency of 94.57 per cent is claimed.

Indigosol Colors. Carbic Color & Chemical Co., Inc., New York. The subject of the new color card issued by this company is "Indigosol Colors on Worsted Yarn." Samples of the dyeing of wool with these colors are submitted, and an outline of the dyeing procedure is offered.

Monel Metal Equipment. International Nickel Co., Inc., New York. The textile uses of Monel metal are outlined in a 50-page illustrated catalog which also includes ten pages devoted to listing the sources from which Monel metal equipment of all types can be obtained.

Nitriding Steel. Electro Metallurgical Co., New York. The properties and advantages of nitriding steel containing chromium and vanadium are reviewed in a 7-page bulletin. Composition recommended, depth of case, and heat treatment recommended are some of the subjects discussed.

Oiling Equipment. Gits Bros. Mfg. Co., Chicago, Ill. A 119-page catalog describes and illustrates the oil cup, automatic multiple oiler, and oil seals manufactured by this company. Specifications and prices are included.

Pulleys. The Rockwood Mfg. Co., Indianapolis, Inc. Recent leaflet contains a list of the complete range of stock pulley sizes manufactured by this company and shows the warehouse stock location. Price sheet No. 720 on pulleys gives new low prices on this equipment.

Scouring Agents. E. F. Houghton & Co., Philadelphia, Pa. This booklet describes the development and use of three new types of scouring agents which have incorporated colloidal detergents with the fats ordinarily used in making soap. Suggestions for the use of these colloidal detergents in such operations as scouring woolen and worsted yarn, boiling off silk, etc. are offered.

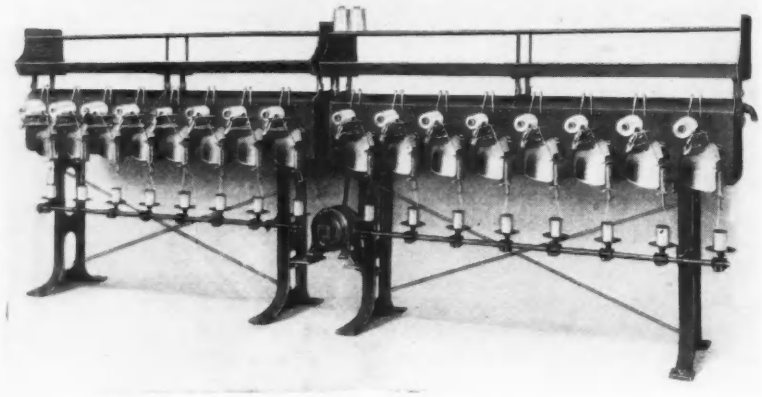
Short-Center, Flat-Belt Drive. Rockwood Mfg. Co., Indianapolis, Ind. Price sheet No. 721 describes new adjustable motor base as well as giving new low prices on this power transmission equipment.

Sodium Perborate, Properties and Uses. Roessler & Hasslacher Chemical Co., Inc., Niagara Falls, N. Y. A 16-page booklet contains information on the physical and chemical properties, chemical reaction, industrial uses and applications, and other features of this product.

Squirrel-Cage Motors. Wagner Electric Corp., St. Louis, Mo. A loose-leaf bulletin page discussing the operation, application, rating and mechanical variations of polyphase squirrel-cage motors has recently been issued.

Starting Switch. Allen-Bradley Co., Milwaukee, Wis. Leaflet describes the essential features of the high-tension, across-the-line starting switch manufactured by this company.

New Machinery *and* Processes



Improved coning machine equipped for silk throwsters

Silk and Rayon Coner

DEVELOPMENT of an improved type of coning machine equipped either for silk throwsters or rayon manufacturers is announced by Universal Winding Co., 95 South St., Boston, Mass.

This new model, known as the Universal No. 30, is said to produce a desirable package economically and at exceptionally high spindle speeds. In addition to high productivity, the arrangement in eight-spindle units is declared to promote flexibility in the allotment of spindles per operator to meet changing mill requirements.

One of the features of the machine is the protective measure against staining of silk in process by lubricating oil thrown from the moving elements. This is accomplished by a total enclosure of all working parts with the exception of winding spindles, tensions, and driving pulleys. The machine is provided with slow-starting spindles, Quixset slubcatchers, and a control for the Antiwear tension and pressure devices that is said to be entirely new in principle.

The gear gain mechanism is designed to preserve a definite ratio between spindle and camshaft speeds, and in this manner any deviation in the wind that could be reflected in the uniformity of the product is declared to be prevented.

Simplicity of construction, accessibility for adjustment, and durability are pointed out as important factors.

Aluminum Coating

A CONTINUOUS coating of protective and preservative aluminum is provided by the development of Permite Resalum by Aluminum Industries, Inc., Cincinnati, Ohio.

It is stated that this paint may be used on metal, wood, fabric, stone, or any combination of these materials Permite Resalum is provided in several types to meet such requirements as heat resistance, corrosion resistance, weather resistance, and light reflection.

The covering property of this paint is pointed out as a very important feature. It is asserted to cover twice as much area per gallon as ordinary paint.

Roller Chain

WHAT is declared to be a new departure in roller chain constuction is announced by Morse Chain Co., Ithaca, N. Y.

Within the roller there are two joint members, a segmental bushing and a pin. The cross section of the pin is that of a round pin integral with a segmental bushing. On account of this construction, when a chain is flexing on or off a sprocket, all sliding movements of surfaces under load is between the pin and its bushing, or, specifically, no movement under load occurs between the roller and the joint members. This feature is asserted to insure uniformity of pitch throughout the life of the chain and will provide smoother and quieter operation.

The open spaces between the joint members provide reservoirs for oil, and lubrication is made more effective by the pumping action when the chain is flexing on the sprocket.

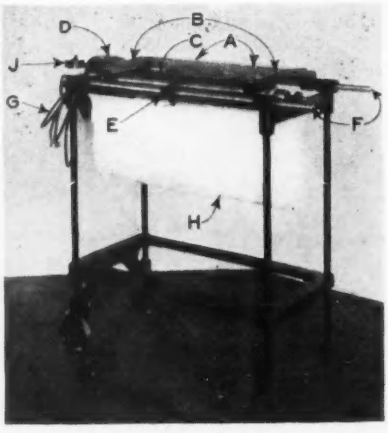
Clearer-Board Napper

FOR the purpose of maintaining the proper condition of the felt used on the top clearer board, the Terrell Machine Co., Charlotte, N. C., has developed an improved clearer-board napping machine. It performs the two-fold service of cleaning the board and of renewing the nap on the felt.

It is claimed that considerably more wear may be secured from the felt by renapping. The machine is portable, compactly built, and of a size which can be conveniently handled in the alleys between spinning frames.

The operation of the machine is described as simple. Clearer board *A* is supported on each end by guide *B*, and a napping roll *C* is located directly beneath these guides and is driven by a motor *D*. One end of the napping roll is directly connected to the motor, while the other end is supported by a ball bearing. Guide *B* may be raised or lowered by adjusting lever *E* to secure the desired contact between the napping cylinder and the clearer board. Lint and dust are collected in bag *H* which is arranged for quick removal.

A switch *J* is mounted on one corner of the machine, and an extension cord *G*, 15 ft. long with standard attachment plug, is furnished as part of the equipment. Handles *F* are provided for lifting one end of the machine so that it may be rolled along on two wheels under the opposite ends. The motor



Machine for renapping the felt on top clearer boards.

which is provided with the machine is ½ hp., 110 volts, single phase, 60 cycles, although other motors may be supplied as required.

Acid-Proof Cement

DEVELOPMENT of a new acid-proof cement, known as pre-mix and available in ready mixed, powdered form is announced by the U. S. Stoneware Co., Akron, Ohio.

It is stated that the hardened cement joints are thoroughly acid-proof and water-proof, although acid painting is not employed. This cement is used and handled in the same manner as ordinary portland cement, i.e., mixed with water on the job. It is asserted that the hardening action is purely chemical and does not depend upon the presence of air.

Further advantages ascribed to this compound are complete hardening of the joint, reduction of joint expansion to a minimum, reduction of waste, and quick setting.

Portable Humidifier

DEVELOPMENT of a portable humidifier for office and residence use is announced by the Bahnson Co., Winston-Salem, N. C.

In appearance, the portable unit is quite attractive. It consists of a pedestal upon which is mounted the automatic humidity control. On top of the pedestal is the reservoir. The mechanism for producing the humidity has been designed for quiet operation. It is stated that no plumbing or electrical work is required to be done in connection with this unit. It is simply placed in a convenient location and plugged into the nearest electrical outlet.

Portable humidifer for home and office use

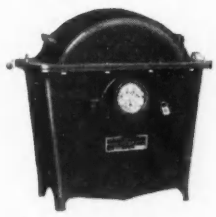
There is a tubular pump on the end of the motor shaft. Water is discharged from this pump on a rapidly revolving disc and thrown against a number of grids or teeth which cause it to be broken into fine particles. Moisture saturated air is gently blown into the room from the circumference of the humidifier.

It is pointed out that proper air conditioning of living quarters, as procured by humidification, promotes both health and comfort. Furthermore, it is declared that by maintaining a higher humidity, the temperature can be materially decreased.

Condensation Meters

MANUFACTURE of Adsco condensation meters in two small sizes, one with 250 lb. capacity per hour and the other with 500 lb. per hour, is announced by American District Steam Co., North Tonawanda, N. Y.

Briefly described, the Adsco rotary is a bucket-type meter containing six identical buckets locked in position at the rotor axis. As the buckets are filled, the weight of the condensate causes rotation, discharging the buckets and bringing empty buckets successively into position for filling. The revolutions of the rotor are transmitted to the dial which registers the measurement in pounds.



Small size rotary condensation meter

Simplicity, accuracy and long service are described as outstanding features of the new instrument. A further advantage ascribed to this unit is the ease of cleaning which it presents.

Electric Stoker Drive

ANNOUNCEMENT of a new electric stoker drive adaptable to type E and type K stokers is announced by Combustion Engineering Corp., 200 Madison Avenue, New York.

The drive consists of a constant speed a.c. or d.c. motor, operating the driving mechanism through a gear box containing a double worm drive. Variation of coal feed is accomplished by varying the number of strokes per minute while keeping the speed and length of the stroke constant. This is done by changing the length of the rest period between strokes. Gears and cams are entirely inclosed and run in oil. Air fans may be supplied as an integral part of the drive or as a separate unit.

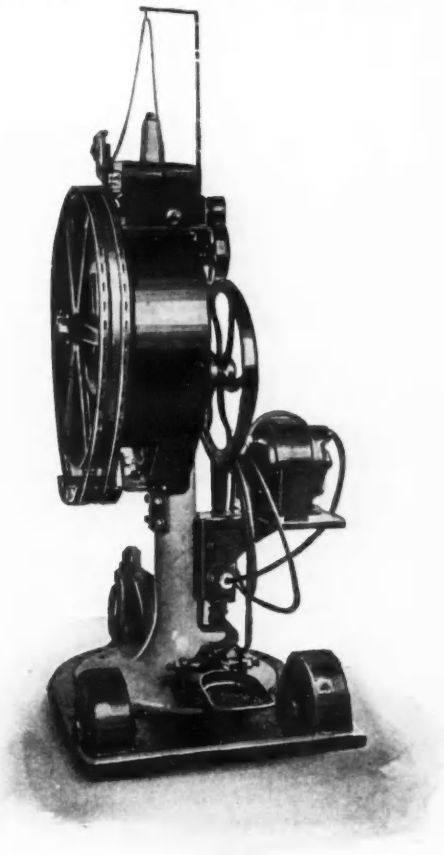
The features of this electric stoker drive may be summarized as follows: Minimum aisle space, simple design, rugged construction, quiet operation, absence of delicate parts, insurance of proper fuel-bed conditions at all loads, and convenient location of the safety shear pin at the front of the gear box.

Rotary Sewing Machines

THREE improved rotary sewing machines all fitted with the Merrow butted seaming head are announced by Dinsmore Manufacturing Co., Salem, Mass. One of the new models is motor driven, while the other two are operated by foot power.

The motor-driven rotary machine uses a 110-volt, a.c. motor which can be plugged into any lighting circuit, or it may be driven by foot power if desired. It is designed to sew goods of any width and is provided with a cloth wheel from which the material is automatically stripped after sewing. It is described as being well adapted for sewing a flat-butted elastic seam.

The foot-driven models, designated as Nos. 8-A and 8-B respectively, differ only in that one is fitted with a cloth carrying wheel while the other is not. They are both said to be rapid sewers and are particularly desirable where it is not convenient to apply electric power and also where low cost is to be considered. It is possible, however, if desired, to have these models motor driven also. Seams are said to be evenly trimmed, and the machines may be easily moved from one place to another.



Motor-driven rotary sewing machine

Questions . . . *and* Answers

Tinting Silk Evenly

Technical Editor:

We have just installed a silk-soaking machine, and have tried this machine on white Japan 13/15, and also with yellow Japan 20/22, 85%. We shall appreciate it if you will tell us what causes uneven tinting of some bales of silk both on white and yellow.

Do you think we would have better results if we used a soluble oil? We are now using a formula which consists of 8% neats-foot oil, 4% olive-oil soap, 2 oz. borax and 1 lb. mildew preventive per 100 lb. of silk. We understand that with this machine we can soak a bale of silk in 1 hr. Do you believe that our silk will have the full benefit of our formula by running it through the machine for only 45 min.? (7824)

The silk soaking machine makes use of a circulating bath, motivated by means of a centrifugal pump. Unless care is taken in loading the machine, there appears to be a chance of channeling, since liquid always takes line of least resistance. However, there are two other factors which can cause uneven take-up and uneven tinting: namely, a poorly prepared soaking emulsion and a poor choice of tints. For silk soaking, neats-foot oil having a maximum acidity of 5% and olive-oil soap having no free alkalinity are standard ingredients. In preparing soaking emulsions there are two important factors: the total volume of the bath and the temperature of the bath. We understand that the correct volume for your machine is 80 gal., and we advise you to use a temperature of 95 to 100° F., since there is a drop in temperature as soon as the bath is circulated.

There is available a line of tints which are of the slowly exhausting type and which are satisfactory for machine soaking. These tints go on to the silk evenly and give distinctive shades. The soaking time usually recommended is 1 hr. per bale. In order to check the time requirement, it is necessary to make a fat-determination analysis of the soaking emulsion at intervals of 70 min. The first sample should be taken after the bath has circulated for 30 min. When the fat content is lowest, the bath is best exhausted and the correct time constant is found. It is quite possible that for hosiery tram you would get better results by using a soluble silk soaking oil which contains some free fat. For crepe, on the other hand, many throwster prefer soap and neats-foot oil.

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Stop Motions on Spring-Needle Machines

Technical Editor:

Can you tell we whether any spring-needle knitting machines are equipped with a quarter-saver as well as stop motion? That is, does the stop motion save the quarter or cloth from running off the cylinder if the yarn should break or run off the bobbin?

The plant I am in is equipped with Campbell & Clute machines, and the knitter tells me he has never heard of any attachment to save the cloth from running off the cylinder with resulting loss of time and breakage of needles. For example, running cones on the machine there might be one or two loose ends in the middle of the cones. As they leave the cone will the machine stop? I may not have made the question quite clear but cannot think of any other way of stating it at present. (7819)

Spring-needle machines of the leaded-cylinder type are equipped with stop motions for the cloth but not for the yarn. The function of this type stop motion is to stop the machine in the event of a hole, bunch, or other similar defect. The stop motion operates as soon as the defect reaches it. Sometimes the cloth will be entirely run off, while, if the cloth breaks out just before the stop motion, the machine will shut off before all of the quarter has run off.

In order to prevent the cloth from coming off the cylinder it is necessary to have the machine stop before a broken or loose end enters the needles. An electric stop motion for this purpose is manufactured, but most knitters have found it most practical to dispense with any extra encumbrances. Therefore, it can be said that there are no commercially made quarter savers for spring-needle machines which will take care of every condition tending to make the cloth run off.

▼

Defect in Knitted Astrakhan

Technical Editor:

I am enclosing a sample of a knitted, fulled fabric which has a very noticeable defect. The trouble lies in the fact that the backing yarn does not appear evenly on the surface of the cloth. In some places it does not show at all, while in others it is quite regular. The sample was knit on 14-gauge, four-feed machines. Two pattern yarns and two plain ends of 30/2 worsted, together with two backing yarns—one worsted, the other astrakhan—were used. Would the filling cause this trouble? (7707)

It is probable that the astrakhan yarn does not loop through to the face of the cloth evenly because of the fact that the loops do not come regularly opposite a space in the cloth. The construction which you are endeavoring to obtain really consists of making a defect appear regularly. The knitted portion of the fabric blocks the loops and prevents them from coming through at some points.

▼

Small Brown Spots on Silk Hose

Technical Editor:

We are enclosing a silk stocking upon which you will notice some small brown spots. We shall appreciate your opinion as to the cause of these spots. (7828)

We believe that the small brown spots in the stocking are grease spots. These are commonly known among dyers as "nigger babies." This defect arises from free oil not properly sulphonated or a free fat not properly saponified, which floats in the dyebath in the form of small globules and is deposited on the goods. These free fats may come from soaking, backwinding, or degumming oils, or from soaps in the dyebath. All these products should be analyzed and the one responsible for the precipitate should be eliminated.

Until the source of the trouble is corrected, it will be advisable to use the split-bath method of degumming; that is to say, split the quantity of degumming agent, and use 50 to 70% in the first boil off for 15 to 20 min., then discharge the liquor, and complete the degumming operation in a fresh bath with the balance of the degumming agent. It is advisable under conditions of this kind to overflow or flush the machine before drawing off any dye or rinsing bath.

Finishing Terry Goods

Technical Editor:

Can you tell us how a terry fabric similar to the enclosed sample can be finished so as not to distort the weave and flatten the surface and so that the loops will stand up full and round as in the sample? (7804)

For finishing terry fabrics, such as the sample which you submitted, we suggest the following routine: After the piece ends have been sewn together, the goods should be saturated in a slack-loop washer containing hot water. This machine is about 4 to 6 ft. long on the face of the rolls. From the saturator, the goods go directly into special kiers fitted with motor, pump, and heater attachments, and internal fittings of special patented design, where they are first given a preliminary boil. Plain white goods without any colored stripes or figures are given a pressure boil for 5 hr. with about 2½% of caustic soda. After the pressure boil, they are thoroughly washed and then are given a 6- to 8-hr. treatment at about 190°F. with 2% of 100-volume peroxide and the necessary silicate of soda and other component chemicals. After the peroxide boil, the goods should be well washed with hot water, pulled out of the kier, and run through a slack washer containing hot water. They shoud then go directly to a second washer about 10 ft. long, slack type, containing cold water. Some concerns go so far as to use a small percentage of hot soap as a rinse after the goods come out of the kier and before the final washing.

It is understood, of course, that fabrics containing colored figures or stripes must be treated with great care, using soap which is very nearly neutral or only slightly on the alkaline side, and employing a non-pressure boil up to about 185°F. It is also policy on colored figured goods not to have the load too heavy.

After this preliminary treatment, the fabrics are treated in the peroxide liquor, etc., in the same manner as are white goods. After the final washing, as they lie in the white bins, the goods are pulled over a special scutcher and two-roll water mangle with rubber rolls.

For dyeing solid colors, one of two methods may be used. The most economical, of course, is the regular dyeing process on jigs. We doubt whether you would be able to get more than 800 to 1000 yd. on a jig at the most. As an alternate method, these goods can be dyed on special reel machines, such as are used in the knit-goods trade, but we are inclined to believe that the cost will run somewhat higher than by the jig method. The only objection to jig dyeing is the possible flattening of the terry weave. However, if extreme tension is not used warpwise on the dye jigs, we are of the opinion that this particular feature could be controlled to given requirements.

In finishing this class of work, after either dyeing or bleaching, it is necessary to use a special hot-air drying machine with brushes working on the face, both before and after drying to bring the loops to a full and upright position.

There are many auxiliary devices which can be installed to bring about economies. For instance, excessive moisture before drying can be removed by a vacuum extractor. On the white goods, the mangling and bluing after the scutcher operation can be done simultaneously, just previous to the goods being taken to the loop or festoon dryer.

We would caution you that the ordinary equipment, such as is used in regular bleaching and finishing plants for regular cotton fabrics, will create considerable trouble in the bleaching and finishing of terry goods. The fabrics will become distorted and the loops flattened to such an extent that they probably could never be brought back to an upright position.

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Shrinkage of Stock Affects Shade

Technical Editor:

We have been spinning from dyed slubbing a 1/15s yarn for bathing suits. Recently our customer decided that he would like to knit the yarn in oil and have it dyed in the piece.

When piece dyed, the fabric comes out the same weight per yard and has the same courses in the knitting; but the piece-dyed fabric seems much looser and does not have the spring to it, or, as we say, it is much sleazier. We are using exactly the same stock. Also, when piece dyeing, we use the same process—scour, dye, and then dry on a spreader on a regular tubular dryer. We shall appreciate any assistance you can give us. (7825)

The only logical explanation of this condition is that there is a slight shrinkage which takes place during dyeing; and if this has occurred before knitting, the threads will lie more closely together and take up the maximum amount of space. If the yarns were made more dense by means of oils and emulsions and then knit, it would make a fabric which would compare closely with the other, until the scouring and dyeing processes had removed all the foreign materials and completed the shrinkage; then the looseness of the fabric would be apparent. The type of dyes that are used may have some bearing on this. If chrome-mordant or after-chromed dyes are applied, there will be more shrinkage than if neutral-dyeing or acetic-acid dyeing colors that are fast to washing and salt water are employed. The latter classes of colors are now generally used for bathing-suit yarns and are noted for the lofty nature of the yarns dyed with them. In any case, however, you must realize that the oils and emulsions used on the wool are playing a considerable part in this problem.

Inquiries should give the fullest information possible; and if damaged material is involved, a sample should be sent. We give no consideration to anonymous inquiries and do not undertake routine analysis of yarn or fabric, or investigation involving unusual expense.

▼

Overhauling Hydro-Extractor Basket

Technical Editor:

We are considering the advisability of overhauling the basket of the hydro extractor which we use for our work. We would like your opinion as to the best method of determining whether overhauling is required on a basket of this type and what signs are used as indication that this process is necessary. The interior surface of our basket is in A-1 condition—we have not had a pull-thread and not a bit of discoloration; the outside of the basket, however, seems to be rusted at the iron rim. (7815)

The question of whether a hydro-extractor basket needs overhauling is one that can easily be determined by any good mechanic. While most extractor baskets are made of non-corrosive metal of some kind—and when of copper, are usually tin plated—many of the baskets of either type carry iron bands. It is thoroughly possible for the interior of a basket to be in good shape, while the exterior—particularly the iron bands—is not.

We would recommend lifting the basket from the extractor and examining the bands by tapping with hammer to remove rust and to see to what extent erosion has set in. In the event that there has been serious breaking down of the iron bands, we would strongly advise having the basket repaired. This can be done by a local mechanic; but, generally speaking, when an extractor has given sufficient service to be in bad condition in the basket, it most naturally stands that it would need a general overhauling in both top and bottom bearings if driven from overhead, and on bottom bearing if under driven. For such overhauling we would advise returning the extractor to the builders for complete overhauling, as we are sure this will be the cheapest in the long run. We have seen extractors which had given 25 to 30 years continuous service overhauled by the manufacturers and put in condition for an additional 25 years use at a negligible cost as compared to a new extractor.

We caution you against the service of a band of gypsies who have been traveling through the country posing as expert repairers of extractors.

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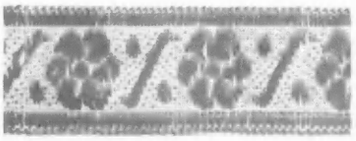
TEXTILE WORLD ANALYST

Firm Prices Through Stock Control Make Ribbons Profitable



Successful and even profitable operations for the year 1931 in the ribbon industry make that field one which other less fortunate textile manufacturers might well study. The secret seems to be recognition of the imprudence in trying to force sales. The industry apparently has the knack of balancing production to demand with the result there is no "price" pushing of distress goods.

SUPPORTED and cheered by its financial reports which were very satisfactory compared to other textile divisions, the ribbon industry entered 1932 in optimistic mood. The twelve months recently closed was a profit-making period for these manufacturers; the net return for the industry as a whole probably did not exceed that of 1930, but, as one executive put it, "we are mighty glad that we could equal that." The healthy status of the ribbon trade this spring is due to favorable style trends and to careful watch on output and prices. Some firms did a sensationally profitable business, others enjoyed more moderate return, and there were very few that did not report at least a fair position.

Analysis of the ribbon situation brings out various facts which could serve as pointers to other textile divisions, this year. The ribbon industry divides roughly into two sections—those who sell quality fabrics through retailers and those who sell lower-price lines to the manufacturing trades and chain stores. In the former field, prices held consistently firm throughout 1931; there was competition, of course, but carefully styled lines moved well when aggressively merchandised. The feminine tendency in women's apparel served to stimulate demand for dress ribbons. Millinery fabrics were important, especially after the advent of the Eugenie type of hat. Satin moires proved a favored line for this purpose. Satin taffetas sold well for dress uses.

The most striking activity was in velvet ribbons which were helped by the strong style trend toward transparent velvet apparel. Most of the velvet ribbons are imported and the market held signally firm at this end throughout 1931. Velvets represent perhaps 20% of the ribbon volume; they are mostly all-silk and have been important for dresses and hats. Ribbon firms which bought velvet stocks outright in Switzerland, France and elsewhere enjoyed good turnover at profitable margin. Velvet ribbon demand extended through a varied range of colors. One point which helps to make profits is that there are fewer seasonal colors, lines being narrowed to a fairly standardized range. Approximately 75% of the colors now used are the same as five years ago.

Ribbon manufacturers are optimistic about the 1932 outlook for pile fabrics; since velvet is again important this year in women's apparel, they look for active and profitable movement of this type of ribbon. Their position at this end is particularly strong, because there is practically no domestic production. Mills need special equipment for the manufacture of pile fabrics and the ribbon group cannot afford to install it, considering the temporary nature of the demand.

One interesting development during the prevalent vogue for velvet ribbons was that some domestic manufacturers of pile broadgoods cut their fabrics to ribbon widths, gummed the edges and embossed them to give the appearance of true selvage; this ribbon was offered on the market during a shortage of the imported product and sold actively for a brief period.

Rayon makes but slow progress as a fiber for dress ribbons of quality, but it is popular in the lower-priced lines. Fabrics with rayon filling and silk warp have been winning favor for hair ribbons. All-rayon ribbon is in demand for box purposes; however, the standard dress ribbons in stores are still all-silk. While the aforesaid is true of the general trend, the opening months of 1932 have brought a greater call for satin ribbons, made of domestic dull luster acetate yarn; previously most of the dull surface rayon ribbons were imported, but the steady improvement in acetate yarns of this type at home, has inclined ribbon mills to turn more and more to the manufacture of this line.

Low stocks were a prevailing characteristic of the ribbon industry throughout 1931, and this was a vital element in making for price stability. Velvet stocks were often at a premium, due to scarcity abroad and the increased domestic demand. American ribbon mills held down rigidly on output, this being true of both quality and low-priced fabrics, mainly the former. Total output of novelty lines showed the greater decline, but production of staples also was below 1930.

It was natural, considering stock position that the ribbon market tone should have held firm for most of 1931. There were occasional bargains clearances, but the continual "price" pushing of distress goods, so noticeable in other divisions, was conspicuous by its absence.

The secret is that the ribbon industry is rapidly coming to realize the imprudence of trying to force sales. These manufacturers take the attitude that there is no substitute for ribbon; either people want it, or they do not. They have a big advantage in that they are not competing with other divisions of the textile industry. When ribbon manufacturers were asked the basic reason for their satisfactory business during a notoriously bad year, they attributed it to their policy of keeping production in line with demand.

The merchandising discussion which appears regularly on this page considers various branches of the textile industry from week to week. It analyzes significant marketing trends or developments in those branches. While it covers current movements, its conclusions concern potential future significance of those movements, rather than the effect of temporary fluctuations in trade sentiment.

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YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

◆Cotton Yarns Gain Better Outlook

THE outstanding feature of the cotton yarn market is the price advance of about 5c. in mercerized yarns. This step was indicated in last week's issue when it was stated there was a likelihood of an advance in these prices as a result of the determination of leading producers to refuse any concessions in an effort to secure not only a more stabilized position, but also to make possible a profit sufficient to enable processors to operate on a sound economic basis. The mercerized yarn market has been on an unsound basis with prices prevailing at which it was impossible to operate without loss, a condition which could not continue for any length of time. A similar condition prevailed in combed yarns in the gray, and of necessity the lack of stability affected the goods markets where these yarns were used as raw material, with some manufacturers anticipating even lower prices.

As a consequence, the announcement of a price advance is regarded as a most important contribution in a constructive policy which should go far to supplying a much needed backbone to an industry that was sadly demoralized. The advance was in line with recent general trends such as the continued firm position of cotton, the large sales of gray goods, and the price advances announced for certain products of other leaders such as Pepperell sheets, etc., Cannon towels, and Cluett Peabody shirts.

As an indication of how far these fine yarns had been depressed, it is noted that up until the fall of 1931, mercerized yarns had never touched so low a price level. The lowest price ever reported previously for 60s-2 was 55c., which was just prior to the world war period. During the erratic price period it was reported that this yarn had sold at 45c., which was well below cost of production. With the present advance, the price for 60s-2 is 55c., so that what might seem like a strong boost is really nothing more than a levelling off in adjusting prices to an already low level. The move should have a healthy influence upon the entire market. It is the first price advance for these yarns since March 1930.

Specifications in mercerized yarns are improving, and while new business is not very extensive, it is nevertheless gratifying. As a matter of fact, none of the processors were anxious to book large orders at the previously prevailing low levels. Prospects for a large consumption in outerwear lines are considered most encouraging. Demand for underwear use is showing a seasonal decline.

Combed yarns are not showing any general activity. Spinners have been making a serious effort to stabilize prices on a firmer basis, with gradually increasing success. There are "fewer weak sisters," as one factor expressed it, to be found today.

Carded yarns find little demand for either weaving or knitting. Here again there are signs of a firmer price position in the attitude of spinners. However, the lack of any volume of business makes it difficult to establish these prices. There are few opportunities today to secure 20s-2 warps at 15c.; it is possible to place orders with some spinners at 15½c., but more are asking 16 and even 16½c.; for 30s-2, 19c. is the price, with 19½ and 20c. more frequently heard. In framespun 10s seem to be pegged at 13c., with 30s at 19½ to 20. Anything like the development of a normal demand would soon be reflected on firmer prices.

◆No Trend in Raw Cotton

THE cotton market has shown no definite trend this week. Fluctuations have been irregular within 15 or 20 points of recent high levels. The sustaining factor has been a continued trade demand combined with steadiness in the southern spot situation. The buying, however, has not been in any way aggressive, making its appearance on declines while it has shown a tendency to taper off on the advances, which have been checked by realizing or southern selling, while toward the end of the week the immediate market seemed to be chiefly dominated by the advance in sterling and readjustments of differences between the New York and Liverpool markets. This led both to the undoing of old straddles and the putting out of new ones, which has caused more or less irregularity, although operations of this sort are, of course, a temporary matter.

As a matter of fact aside from the advance in sterling, traders seemed to

(Continued on page 54)

Market Briefs

Cotton: Uncertainty yielding to firmness.
Cotton Yarns: Rise in mercerized encourages market.
Cotton Goods: Steady in quiet period.
Wool: Resists pressure for cut prices.
Worsted Yarns: Stagnant market.
Woolen Goods: Easter spurs suitings demand.
Silk: Prices 5 to 10c. off in weak market.
Silk Yarns: Thrown silk quiet; spun silk knitting yarns active.
Silk Goods: Strike reduces sales to cutters-up.
Rayon: Curtailment brings confidence.
Knit Goods: Sewn mesh hosiery in good demand; branded lines favored in fall underwear; swimsuit sales increase.

◆Worsted Yarns Find Limited Demand

NO DEVELOPMENT of volume business in worsted yarns is noted this week, but demand for prompt delivery for immediate needs is apparently well maintained. There is an improvement in activity on yarns for swim suits in better specifications as well as additional shipments. However, spinners are not booking enough orders to keep their mills operating on a satisfactory basis.

Under such conditions the price situation continues to be a riddle. This is especially true in weaving yarns where demand has been of such unusually small proportions that there has been only scattered activity. Dealers assert the bulk of the limited weaving yarn business went to mills in New England. It is difficult to know just where prices for these yarns are to-day, and the situation is complicated by demand for fancy yarns of varying qualities and color combinations. The situation is indicated in statement by one spinner to the effect that he had usually quoted a low price himself, but found that he had lost the order to a price 5c. lower. This absence of any price basis cannot continue if spinners hope to remain in business.

Another factor likely to contribute to the complications of the market is the firm position of wool, and the possibility of advances with the development of the new clip. Should this advance be realized, spinners and yarn consumers would find themselves in a difficult position, if they have indulged in gambling in short selling of yarns or goods on a lower basis.

As previously noted yarns for swim suits have been developing slowly with increasing specifications and some new business. It would seem that this trade is again to find a season crammed into the production of a few months instead of distributed over a reasonable period, with consequently lost business because of inability to deliver yarns or goods in time. Demand for yarns for the women's lightweight sweaters seems to be slowing up after being a leader in an otherwise quiet market. What suggests lack of proper merchandising is to be found in the fact that while worsted lines are selling as low as $6 a dozen, the same types of garments in mercerized and combination yarns are being sold at $8 a dozen.

Inquiry for skein-dyed yarns continues, with a single 20s French spun noted at $1.22½, while a slub-dyed single 18s Bradford of 50s quality is noted at 90 to 92½c. The old contention as to the relative advantages of the single and ply yarns has come again to the fore, with advocates of ply yarns asserting

YARNS AND RAW MATERIALS

that the difference in the cost of the yarn is more than offset in the loss in waste and seconds, and they predict a return sooner or later to the use of ply yarns, especially for swim suits.

Weaving yarns find little activity. Demand for goods seems to be directed to those out of stock, so that manufacturers find little encouragement except in planning for the future.

◆Pressure for Lower Wool Ineffectual

WOOL demand has been very dull during the last few days, the situation showing little change from the middle of February. Mills coming into the market for small amounts at concessions receive little encouragement from holders of good wools. Available stocks are much smaller than a year ago and on a lower but much more stable price basis. Interest is indicated by the making of lower bids on wools likely to be required for manufacturing in the near future. Large wool holders are not catering to the bearish disposition evinced by manufacturers, believing as they do that there is available in current basis on raw material a firm foundation for manufacturing operations.

It is becoming apparent that domestic wool growers can supply a large percentage of the needs of the wool industry and that only a few manufacturers, wedded to the use of choice Australians for the production of fabrics closely and for long time identified with their mills, are likely to show sustained interest in importation of merinos. And yet even in these cases, exclusive use of the foreign wool is said to be no longer necessary, equal results being obtained by blending choice territory or delaine with the foreign wool.

Purchases are on a hand-to-mouth basis and quick delivery is usually required. Bulk French combing and other similar western wools in original bags have been selling on a range of 49 to 53c. with the short French combing wools moving at prices on the low side of this range. Small sales of strictly combing half-blood occur on a 52 to 54c. clean basis while three-eighths-blood combing wool brings from 47 to 50c. The lower grades continue inactive.

To most topmakers the situation at the moment is discouraging. Lack of adequate business on which profit may be made seems the chief feature of the market. Makers of standard quality tops usually obtain prices commensurate with the cost of wool and its conversion, but below these standard lines all kinds of prices and tops are available. However, output is gradually being better balanced to the consumption.

◆Low Prices May Move Substitutes

THE recovered wool industry is still in the doldrums. No expansion of demand of importance has yet been seen, but it is encouraging to note that woolen mills were much more active in January and used 800,000 lb. more scoured wool as well as larger quantities of noils and mill wastes.

Woolen rags and clips are meeting erratic demand chiefly for small lots. There is no opposition to the purchase of rags on the ground that they are too high priced, but manufacturers say that the type of fabrics they are producing does not permit a larger utilization of these materials. Rag supplies in many of the colored sorts are quite abundant but white rags are in small supply.

The wool wastes are steady but quiet. Traders are banking on the fact that the general line of wool wastes, white and colored, is so attractively priced that on the appearance of business from the goods market manufacturers will hardly be able to overlook the opportunity for cheap good wool substitutes provided by the market. Colored stuffs continue in slow movement. White threads are a trifle irregular in price. Imports of wool wastes have fallen off to a small volume.

◆Curtailment Helps Rayon Market Tone

EXACT ratio of curtailment decided upon by rayon producers was not yet procurable this week, but market reports indicated that it probably would bring output down to about 70% of capacity as against slightly above 80% at the beginning of the year. Some firms have reduced to 60%, others are still operating about 75%.

This reduction if generally followed, will bring stocks down to about six weeks' supply, and some firms plan to cut stocks even lower. Market tone is much healthier since the curtailment was decided upon and the current outlook is quite encouraging. Demand from weavers which let up sharply at the beginning of the month, has improved, but is still light.

Knitters are buying actively and it is estimated that rayon orders from this division are about 75% of normal. Underwear mills are in good position and there has been improvement at the hosiery end. With the exception of the acetate division, prices are firm; acetates remain very competitive and true levels are difficult to ascertain. Acetate stocks are believed to be considerably larger than those of viscose yarn.

◆Weak Market Slows Thrown Silk Sales

HOSIERY mills which have been the mainstay of silk throwsters for some weeks, slowed up on their yarn orders this week, with the result that thrown silk sales reduced to a very discouraging point. Both weavers and knitters now buy virtually day-to-day, anticipating further declines in the primary market. Thrown yarn prices have fallen considerably, as a reflection of raw silk drop. Broadsilk mills reported a slight improvement in fabric demand this week, which may stimulate yarn orders, if it continues.

Throwsters hear complaints of inferior Japanese silk being sold to hosiery manufacturers; it is claimed that stocks sometimes contain mixtures from different crops and from different reelings, which makes for unsatisfactory hosiery.

Spinners enjoyed a good week at the knitted underwear end; this market is improving due to lower prices for spun silk garments; some of these now sell below $1.00. Spun yarn is going into both men's and women's underwear. There is little call from weavers, due to the minor interest in shantungs this season.

◆Silk Hits New Low; Quality Criticized

DECLINING prices and criticism from hosiery manufacturers of the quality of current raw material shipments added this week to the problems of the raw silk market. Quotations registered a drop of 5c. on most grades, and 10c. on Monday and Tuesday brought a new low of $1.45 on the Exchange.

Importers are uncertain as yet as to the importance of the criticism being offered by some hosiery knitters. Some raw silk factors said the percentage of their rejections so far was only slightly above last year's average. Hosiery mills claim that they are getting more and more mixed stocks; shipments contain both old crop and current crop silk, it is charged; the comment offered by several importers was that Japanese reelers are probably getting careless through dissatisfaction with the meager profit allowed them on present low prices.

Hosiery mills have been buying actively during recent weeks and some are covered up to July; this week, however, brought a lull in orders. Broadsilk mills are curtailing due to a poor spring season and only the most immediate needs are filled. Tightening of credit requirements by importers also has affected sales to the weaving industry.

FABRIC MARKET REPORTS

TEXTILE WORLD ANALYST

◆Cottons Hold Firm in Dull Period

AN EXCELLENT degree of firmness has been demonstrated in the cotton goods market during the last week or more. The period has been quiet and there has been some second hand selling of gray goods at fractionally under the first hand market. This bearish pressure has been successfully resisted, however, and it is believed on the market that stability will be maintained until a new buying wave is encouraged. It has been shown time and again that cutting prices only repels and does not encourage business; in quarters of the market where advances have been made, there is now better feeling and actually better business.

It is said by good authority that last fall the gray goods market could not have experienced a three-weeks lull without a rupture in its price structure. The current regulation of production keeps stocks well within reasonable bounds, and, since there is no pressure from first hands, prices remain without change. Some buyers have been operating quietly for May, June and July deliveries at current prices. For 39-in. 68x72s, the market was at 4½c. at mid-week, and 38½-in. 64x60s were at 3⅞c. There was some interest in 27 in. 64x60s at 2⅞c. Carded broadcloths were quiet. For 5-yard 80x60s the asking price was 4⅜c., which buyers could take or leave.

Sheetings were also quiet this week and there was no appreciable change in prices. Some 4-yard 48-squares changed hands for 4⅛c. For spots of 6.15-yard 40-squares 3c. was asked. There was scant inquiry for drills and sales of 3.25-yard goods were made at 4¼c. Improvement in the automobile, steel and railroad groups will it is believed help the market for the heavier cottons.

Towels were advanced about 5% by leading makers recently. It is said that the advance was well received by the trade and led to a considerable volume of orders.

As mentioned in this column several weeks ago, retail trade lately had been disappointing. Total retail sales in the New York Federal Reserve District for January fell off 19% from a year ago; cotton goods retail sales fell off 17%. As previously stated a more lively retail distribution is needed to start a general movement of textiles on the primary markets.

The rise in sterling at mid-week was an encouraging sign to many merchants in the cotton goods market. They see in the higher rate on the British pound an opportunity for the Manchester mill to buy cotton to better advantage and so contribute more fully to the support of that staple.

Cotton house-dresses are coming to be an important department of many retail stores. Not only are percales, broadcloths and lawns prominent in these collections, but fancy weaves utilizing nub and other novelty yarns are gaining in interest.

The spring season in wash goods is slower than expected at the start. Credits are said to be one of the main items in holding up expansion of trade, and converters are scrutinizing the condition of their customers more carefully than usual on the grounds that they cannot afford to take risks. Fine and fancy gray goods reflect this cautious situation as buyers take only small lots, sticking to staples for the most part.

◆Strike Reduces Call For Broadsilks

EFFECT of the dress trade strike on the broadsilk market was evident this week in the occasional concessions announced by even some large broadsilk houses on their newest fabrics. During the last ten days fabric demand from cutters showed a big drop in the New York market; some broadsilk houses estimated that their sales for several days declined nearly 50% at the cutting-up end. Weavers continue confident, however, and with the exceptions above noted, are holding to list prices.

The let-up in demand among cutters has affected all the chief spring fabrics. There was a fairly good call from piece goods buyers last week but here too orders slackened at the opening of the current week. Broadsilk mills have curtailed moderately; there is abundant stock available, especially of pure dye cantons, and further curtailment appears advisable. Current orders show a trend to printed flat crepes, with some feeler demand for chiffons and considerable interest in georgettes.

◆Approach of Easter Aids Wool Goods

A BETTER feeling was evident in the wool goods market this week, especially as regards men's worsted suitings. The approach of spring and the Easter season has encouraged cutters of men's apparel to place considerable business. All orders are of the week-to-week type, but buying is steadier and mill agents are considerably encouraged. The trend is toward lighter shades in suitings, and there is a growing interest in novelties; however, it is doubtful whether spring will bring any real fancies demand, and manufacturers are holding down production at this end.

Business is decidedly of the clearance sort. With a few exceptions, the trade has given no thought to the fall season. Cutters shrug their shoulders when fall is mentioned, being occupied entirely by the immediate market. Mill representatives are glad enough to get the spot orders and are not disposed to force futures. Women's wear fabrics also are in good call, and topcoatings which weakened for several weeks have improved once more. Some of the mills specializing in topcoatings fared well this season, thanks to the mild January.

▸Home Furnishing Demand Rising, Survey Shows

Expectations of a considerably improved market for floor coverings during 1932 seem to be verified by information reaching the Bigelow-Sanford Carpet Co. This information is in the form of an analysis of a survey recently conducted by Professor Daniel Starch, economist and research specialist of Harvard University.

Dr. Starch recently directed a survey in 21 cities ranging in population from 500,000 to 2,500. More than 1,000 families in all ranges of incomes were questioned. To the question, "What item do you intend to buy next?", 14% replied, "A rug." This percentage was topped by only one other item, an electric refrigerator. Other items of home furnishings which ranked close to the top were radios, 12.01; vacuum cleaners, 9.8; and furniture, 9.1.

This information bears out the survey conducted by the advertising department of Bigelow-Sanford and lends credence to the expectation of an improved year in 1932, officials said.

▸January Broadsilk Sales

Yardage sales of broadsilks increased 1.5% during January as compared with the previous month, and decreased 14.7% as compared with January, 1931, the Silk Association of America, Inc., reports. Stocks on Jan. 31 were 2.1% higher than on Dec. 31 and 8.1% lower than on Jan. 31, 1931.

▸Use Pepperell Fabric in Shoes

Two patterns of the Pepperell Malibu beachcloth will be made into Walk-Over shoes by the George E. Keith Co., Campello, Brockton, Mass. They will retail for $4.95.

▸Students Inspect Berkshire Knitting Plant

Students in the third year class in textile engineering of the Penn State Extension, Reading, Pa., went through the Berkshire Knitting Mills, Reading, recently, on an inspection tour. Floyd K. Fogleman is the instructor of the class.

KNIT GOODS MARKETS

TEXTILE WORLD ANALYST

◆Cut Mesh Hosiery Favored for Easter

IMPROVEMENT in the call for cut and sewn mesh hosiery was one feature of the late Easter buying, as evident during the last ten days. Prices at this end are stronger than had been expected; mill agents are writing good-sized orders for cut mesh numbers made to retail at $1.25, and they have no difficulty in getting list prices. Production of these low-priced novelties is less hectic, as the mechanical difficulties encountered caused numerous manufacturers to withdraw their lines. Stocks of cut mesh available in New York are moderate; few firms are sold ahead, but market tone is steady and mills look for continued Easter buying.

Higher quality lace and mesh lines show little change; demand is spirited and buyers have difficulty in getting spot delivery. Staple full-fashioned hosiery showed greater activity this week, and market outlook is encouraging; prices hold steady. The large distributors have placed most of their Easter business, but many medium-sized stores and jobbers have yet to be heard from, and considerable last-minute buying is expected.

Half-hose also has felt the Easter stimulus; demand is less than had been hoped for, but low-priced lines are moving actively. There is a slight trend toward better quality, as evident in the increased demand for half-hose to retail at 50c. Men's hosiery stocks are less than last month, which has eased the price pressure somewhat.

◆Fall Underwear Call in Branded Lines

BUYER response to fall underwear openings has been leaning more to higher quality lines than to merchandise of the "price" type; mills offering both branded lines and unbranded garments, note better movement of the former. While the whole fall underwear season is opening slowly, manufacturers were somewhat more confident this week than they were immediately after the lines opened. Some companies reported a healthy advance business on branded lines, while admitting that their lower-priced merchandise had shown little activity.

Movement of lightweight underwear has been spirited and mills are behind in deliveries. There is an excellent call for union suits and pullover shirts, and manufacturers ask ten days to two weeks for shipments. Stocks are low and prices are very steady. While cottons show their normal lead there is also a good demand for both men's and women's rayons, especially the latter. The current buying leans so strongly to lightweight ribbed union suits that manufacturers in many cases are operating at capacity. The lightweight ribbed suit is regarded as one of the big items of the opening season and continued activity is looked for. Shirts and shorts move steadily and with no lessening of volume. Buyers report a growing consumer preference for the ribbed suit as against nainsooks.

Underwear manufacturers regard the outlook as promising, but production is being watched with care, particularly in the case of the low-priced heavyweights where advance business is decidedly backward.

◆Improved Demand For Swimsuits

APPROACH of Easter and increased southern travel stimulated swimsuit demand during the last ten days, and manufacturers now talk more encouragingly of outlook. Some firms take exception to the opinion previously expressed that bathing-suit buying is 50% below this time last year, asserting that their total volume is above that estimate.

Orders show a sharp line of demarkation, interest centering on the high-priced quality garments and the low-priced volume merchandise. Several well-known firms which specialize in better-grade suits note good buying in the $18 to $22 range and also in the $36 range, but very indifferent sales in the intermediates. The trend is toward more conservative designs, even in women's lines; contrasting colors are favored and pastels are popular but mesh decorations, bows and other feminine effects are practically taboo by buyers.

White grows more important each day in both men's and women's bathingsuits and knitters expect this trend to become a definite vogue in the summer of 1933. White suits for women are more popular than white suits for men, at present but white is viewed as very promising at the latter end.

Sweater Prices Steady

Mills still hold off on showing heavyweight sweaters. Some firms have opened the fall lines, but the bulk of the trade is waiting some show of buyer interest. Meanwhile, there is good call for women's worsteds, springweight, and knitters prefer to center on this business. Output of women's worsteds has increased and spot delivery is now general. Prices are steady in most sweater divisions, and the outlook is considered good.

◆Raw Cotton Report

(Continued from page 51)

have found very little inspiration in the week's news. The weather in the South, after having been favorable for farm work and the movement during the previous week, turned wet again with a decided drop in temperatures. On Wednesday some unseasonably low temperatures were reported with the forecast pointing to freezing weather in the western belt to the Gulf Coast. It was felt that such temperatures might cause some damage to early cotton in the Rio Grande Valley, but on the other hand that the weather might be cold enough to reduce the number of boll weevil in hibernation. In this connection it is pointed out that entomologists are agreed temperatures of 10 to 12° above zero for a three day period, would destroy enough weevils to reduce damage the following season.

The report of the International Federation of Master Cotton Spinners and Manufacturers Associations on world's consumption for the first half of this season was about in line with expectations based on recent monthly reports by the New York Cotton Exchange Service. It places the world's consumption for the six months ended Jan. 31 at 5,940,000 bales of American lint cotton against 5,278,000 for the first half of last season and mill stocks of American lint at 2,710,000 against 2,427,000 last season. Consumption for the first half of this season, consequently, showed an increase of about 662,000 bales compared with the corresponding period last year and if there should be a similar increase for the second half of the season it would make a total world's consumption for this season of around 12,222,000 bales. Estimates of the season's total have been heard up to 13,000,000 bales.

◆Cotton Waste Prices Steady

A MODERATE amount of buying of peeler comber by domestic and foreign consumers continues to provide the bulk of the business in the cotton waste market. The supplies of this commodity are not excessive and this, together with the relative firmness of raw cotton prices, have tended to stabilize quotations of strictly No. 1 comber around 6¼c.

There is also a fair amount of buying of peeler strips and soiled card strips, mostly by southern mills at firm prices. While the volume of business in stuffing wastes is not large, it is sufficient to keep quotations firm. Good grades of willowed picker are at 3c.

TEXTILE FINANCIAL NEWS

TEXTILE WORLD ANALYST

♦Kendall Co. Has Better Year

THE Kendall Co., operating cotton mills in the North and South, reports for the year ended Dec. 26, 1931, a net profit of $128,913 after dividends on the preferred stock of subsidiaries and possible additional taxes for prior years, but before dividends on series "A" preferred stock. In 1930 the company reported a net loss of $258,850. After allowance of the dividends on series "A" preferred in 1931, there was a net reduction in surplus account of $94,763. The company's balance sheet as of Dec. 26, 1931 showed current assets of $6,076,185 and current liabilities of $725,058, leaving working capital of $5,351,127, as compared with $5,223,866 at the close of 1930.

Van Raalte Nets Small Profit

Van Raalte Co., Inc., reports for the year ended Dec. 31, 1931, net profit of $16,506 after all charges, compared with a net loss of $96,435 in 1930. Unit sales in 1931 were about 10% greater than in 1930, while dollar sales were maintained at better than 90% of 1930 volume. Current assets at the close of 1931 totaled $4,088,617 against current liabilities of $217,752, leaving working capital of $3,870,864, which compares with working capital of $3,786,576 at the end of 1930. The annual meeting will be held on March 24 at which time stockholders will be asked to approve the directors' proposal to write off the good-will item of $1,455,048 and retire 1,600 shares of preferred held in the treasury.

Charlottesville Mill Profit

The Charlottesville (Va.) Woolen Mills report for the year ended Dec. 31, 1931, net profit of $87,676 after all charges, equal after preferred dividends to $14.61 a share on the common stock. This compares with a net profit of $91,197, or $15.21 a common share, in 1930.

Mt. Vernon Mills Loss

The Mount Vernon-Woodberry Mills, Baltimore, Md., report a net loss of $1,009,370 for the year ended Dec. 31, 1931, which compares with a net loss of $99,881 in the previous year. Surplus account was reduced from $1,551,098 at the end of 1930 to $526,803 at the close of 1931. Current assets as of Dec. 31, 1931, totaled $2,506,710, and current liabilities $949,774, leaving working capital of $1,556,936, whereas net quick assets a year before stood at $3,064,587.

Propper-McCallum Loss

The Propper-McCallum Hosiery Co., Inc., reports for the year ended Dec. 31, 1931, a net loss of $314,720 after all charges. This compares with a net loss of $343,634 after all charges in 1930. Net sales in 1931 totaled $3,307,681 against $4,337,348 in 1930. The balance sheet of the company as of Dec. 31, 1931 showed current assets of $1,237,792 and current liabilities of $229,018, leaving working capital of $1,008,774. Surplus account declined to $298,147 from $633,053.

Real Silk Cuts Inventory

Drastic reductions in inventory were made by Real Silk Hosiery Mills, Inc., in the year ending Dec. 31, 1931, as shown in annual balance sheet. Inventories that year totaled $1,353,340, following a change in policy of valuing this item to "at lower of cost or market." This compares with inventories of $4,110,588 at the close of 1930.

The balance sheet also shows current assets slightly in excess of current liabilities at the close of 1931. Adjustments made during 1931 have resulted in a deficit of $463,340, compared with a total surplus at the close of 1930 of $4,074,707.

Real Silk Hosiery Mills, Inc., and subsidiary corporations report for the year ended Dec. 31, 1931, a loss of $324,737 after all charges and after deducting depreciation amounting to $566,096. In addition thereto, the company in June, 1931, made certain special capital surplus adjustments as a result of writing off unamortized discount on preferred stock and organization expense, writing down goodwill to $1 and reducing from cost to market value the company's own stock held in the treasury.

The company reports that total net dollar shipments of merchandise during 1931 amounted to more than 75% of such shipments for 1930.

Approve Knitback Merger

Approval of the plan for a merger with the Gotham Knitback Corp., was voted this week by stockholders of the Gotham Silk Hosiery Co., at a meeting in New York. Knitbac stockholders will meet next Monday in Wilmington, Del., to pass on the proposal.

The board of directors of the hosiery concern had previously agreed upon the merger plan and this week's meeting was in the nature of a ratification of the project.

James Talcott Increases Sales

At the annual meeting of James Talcott, Inc., textile factors, held Feb. 18, J. Frederick Talcott, president, reported that the volume of sales factored in 1931 was the largest in the history of the company with the exception of 1929. The corporation now acts as factor for over 200 textile merchants, manufacturers and selling agents throughout the United States and abroad.

Commenting on the textile industry in general, Mr. Talcott stated that he was encouraged by the fact that inventories of raw and finished merchandise were low, that wages were being amicably reduced, that yardage production was holding up well and increasing, and that in the past the industry has prospered during the periods of low cost of raw materials.

Maverick Net Profit Rises

Maverick Mills, East Boston, Mass., reports a net profit for 1931 after depreciation, bond interest and taxes, amounting to $42,425, equal after 7% preferred dividends to $8.47 a common share. This compares with 97c. in 1930 and $14.20 in 1929.

Boston Stock Auction

The following sales of textile shares were made at auction in Boston, Mar. 2:

Shrs.	Mill	Par	Price	Change
8	Esmond, pfd	100	74	....
10	Hamilton Woolen Co.	100	47½	—2½
18	Total			

▸New England Textile Stocks

	Sale	Bid	Asked
Am. Mfg. Co., pfd	50	45	..
Amoskeag	3½	..	..
Arlington	12½	10	15
Associated Textile	10	..	10
Bates	10	10	12
Berkshire Associates, com	1½	1	2
Berkshire Associates, pfd	40½	8	12
Bigelow-Sanford, com	20	..	..
Edwards	80½	40	45
Farr Alpaca	27	16	18
Hamilton Woolen	47½	45	50
Hill	7	2	5
Ludlow	56½	50	53
Merrimack, com	3½	4	..
Nashua, com	3¼	3	6
Nashua, pfd	29	15	..
Maumkeag	50	46	50
Newmarket	5	9	12
Otis	45	41	45
Pacific	10	..	..
Pepperell	34½	36	38
Plymouth Cordage	49	48	52
West Point	35	32	35
York	8½	4	..

▸Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended Mar. 8.

	High	Low	Last Sale	Net Ch'ge
Adams Millis	30½	27	30	+3
American Woolen	5	4½	4½	—½
American Woolen, pfd	30½	28	30	+½
Belding-Heminway	4½	3½	4½	+½
Cannon Mills	18½	18½	18½	+½
Century Ribbon	5½	5½	5½	....
Collins & Aikman	10½	8½	10½	+2
Consolidated Textile	½	½	½	....
Gotham Hosiery	11½	10½	11½	+½
Industrial Rayon	38½	33¼	37	+2
Kayser, Julius	9	8	8½	+½
Kendall, pfd	35	32½	32½	—5½
Mallinson	½	½	½	....
Mohawk Carpet	10	9	9½	+½
Munsingwear	14½	14½	14½	—½
Pacific Mills	10	10	10	....
*Pepperell	36½	36½	36½	+2½
Real Silk Hosiery	3½	3½	3½	—½
*Tubize	5½	3½	5	+1½
United Piece Dye Works	9½	9	9½	+½

*Listed on Curb.

Philadelphia Knit Goods Week Plans Near Completion

MORE than 140 individual companies have contracted for exhibit space at the 28th Annual Knitting Arts Exhibition, to be held Monday, April 11 through Friday, April 15, at the Commercial Museum, Philadelphia, it was announced yesterday (Friday) by the National Association of Hosiery & Underwear Manufacturers.

These companies have arranged for over 310 booths in which to display their products. Total reservations to date represent more than 80% of the space occupied at the 1931 Exhibition. Final reservations are expected to bring the 1932 exhibition reservations up to about the same size as last year.

The Exhibition is held under the auspices of the National Association of Hosiery & Underwear Manufacturers and in conjunction with its annual convention and luncheon.

This year the Association's annual meeting is scheduled for 11 a.m. on Thursday, April 14, in the lecture hall of the Philadelphia Commercial Museum. This is a soundproof room, adjoining the exhibition hall proper.

Details of the convention program have not yet been completed, but it will be featured by the annual address of William Meyer, president of the Apex Hosiery Co., Philadelphia, who is completing his first term as president of the Association.

One other formal address, on a subject of major importance to the entire industry, will be announced shortly. The convention will be a brief business session, and will be followed immediately by the organization's annual luncheon, scheduled for 1 p.m. in the dining hall of the Commercial Museum. Over 500 are expected to attend this luncheon. The convention is of particular interest, in that it will mark the first formal appearance of Earl Constantine, recently elected managing director.

President Meyer this week announced the appointment of the nominating committee of which G. C. Good, Globe Knitting Works, Grand Rapids, Mich., is chairman. Other members are: J. Wyckoff Mettler, J. Lee Bausher, J. H. Adams and C. V. Williams.

Every important manufacturer of seamless machines and every manufacturer and importer of full-fashioned machines has taken space in the Knitting Arts Exhibition, and their booths are certain to be a powerful magnet for the knit goods manufacturers attending the show. Yarn spinners and dealers, manufacturers and distributors of oils and chemicals, equipment and supplies in general will be represented extensively.

It is not yet definitely known whether a full-fashioned hosiery knitting machine will be in operation at the exhibition. There are reports that several well-known manufacturers of seamless knitting machines plan to display new machines. An unusual number of new products, and refinements and improvements on old products, will be displayed by a substantial group of equipment and supply houses. The exhibition is under the management of Chester I. Campbell, Park Square Building, Boston, who has managed the event for many years.

▸ Gray Goods Clearing House Suggested

(continued from page 24)

operated machinery, curtailment is almost futile, if as of old, the price structure is left to its own resources, defenseless and disorganized. As long as the independent gray producer limits his cooperation to questions of production only, his customers dare not operate without attacking prices. It must be borne in mind that the basis for a healthy finished goods market must be created in the gray market. We cannot ask gray goods buyers for cooperation unless we furnish them the practical basis on which they can convincingly cooperate.

"The only real stability which any market can attain must be reflected in economically sound and equitable prices. These can only be obtained by and through common action and involves some delegation of authority. Clearing house action to be sound must be dictated by public policy translated through machinery skillfully operated and attuned to the facts of the market place. Like all other industrial effort, it will fail if it is poorly handled and if its authority is not centralized. We have no illusions that prices can be or should be artificially lifted; we have definite conviction that they can be reasonably stabilized and furnish a base for an efficient and self-respecting industry."

▸ R. I. Chemists Meet

The March meeting of the Rhode Island Section of American Association of Textile Chemists and Colorists, was held on March 11 at the rooms of the Providence (R. I.) Engineering Society. George W. Caesar, research chemist, Stein Hall & Co., spoke on "Recent Researches in Starch." James Shanks, Lorraine Mfg. Co., spoke on "Rayon Warp Sizing." Brian Wainwright, Apponaug (R. I.) Co., is secretary of the section.

▸ A. K. Victorius Retires From Hosiery Selling

A. K. Victorius, president of the Paul Knitting Mills, and A. V. Victorius & Co., has retired from the selling end of the hosiery business and the latter firm has been liquidated. Mr. Victorius was connected with the business for thirty years. He will retain his interests in and devote his time to the Paul Knitting Mills and the Inspiration Hosiery Mills, of which he is also president. These mills are located at Pulaski, Radford and Wytheville, Va.

Mr. Victorius explained that the discontinuance of the firm under his name came as a desire to lessen his personal activities.

The selling end of the hosiery business will be carried on by Walter P. Harris, former sales manager and secretary of the A. V. Victorius Co., who will have exclusive sales control of the Victorius lines.

▸ Finishing Activity Gains

The National Association of Finishers of Textile Fabrics has issued its monthly statement of percentage of normal average capacity operated in the industry as follows:

	1932 (4 Weeks)		February	1931 (4 Weeks)
White and dyed Combined	59	42%–White 58%–Dyed	58	46%–White 54%–Dyed
Fast black	18		19	
Logwood and/or sulphur black	30		30	
Prints	86		75	
	1932 (5 Weeks)		**January**	**1931 (5 Weeks)**
White and dyed combined	49	44%–White 56%–Dyed	49	47%–White 53%–Dyed
Fast black	15		14	
Logwood and/or sulphur black	21		42	
Prints	64		65	

▸ Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Mar. 5, based upon data compiled by Dept. of Agriculture, follow:

	Week Ended Mar. 5	Total to Date 1932	Total to Date 1931
Domestic	190,000	10,571,000	11,652,000
Foreign	697,000	8,519,000	9,168,000
Total	887,000	19,090,000	20,820,000
IMPORTS AT PRINCIPAL PORTS			
Boston	697,000	8,519,000	9,168,000
Philadelphia	127,000	6,402,000	6,469,000
New York	681,000	7,781,000	9,838,000
Total	1,505,000	22,702,000	25,475,000

▸ SRA Dyes Reduced in Price

The Celanese Corp. of America has reduced prices on a number of SRA dyestuffs varying between 10 and 20% on different items. The company states that increased sales and production have made possible savings which are thus being passed on to its customers.

As typical of the new list Blue III powder has been reduced to $2.50 from $2.95; Orange II, $1.60 from $1.80; Pink II, $1.50 from $1.90; Heliotrope I, $2.25 from $2.50; Golden yellow IX, $1.05 from $1.15. Prices are f.o.b. New York, 1%, 10 days, net 30.

▸ Western Outerwear Group Meets March 15 in Milwaukee

The Knitted Outerwear Manufacturers' Association, Western District, will hold a meeting Tuesday, Mar. 15, at the Hotel Schroeder, Milwaukee, Wis. The meeting will be preceded by a dinner. A. J. Friedlander, M. Friedlander Knitting Co., is president of the organization.

Retail Prices on Sheets Strengthens

A general rise in the retail price level of nationally advertised sheets and pillow cases with mark ups more favorable to retailers and manufacturers alike is indicated in an analysis of retail newspaper advertising throughout the country during February made by Pequot Mills, Salem, Mass. Special sales at or around $1 for size 81x99, regarded by retailers and manufacturers alike, according to the Salem mill management, as ruinous, were practically eliminated as compared with activities of previous month.

Advertising appearing in newspapers in a group of 24 communities selected at random representing a cross section of the country, show that prices in stores in 15 of the 24 communities on 81x99 sheets were $1.18 up to $1.45 as compared to much lower figures during January. The price of $1.45 was the highest and 95c. was the lowest.

Champlain Output Starts May 1

The Champlain Spinners, Inc., plans to begin production of spun rayon yarn at its mill at Whitehall, N. Y., about May 1, and will employ 1,200 persons, according to announcement by Theodore Belanger, president and general manager of the company.

Other officers of the company include James E. Shinners, first vice-president; John W. Green, second vice-president; Harold W. Scott, treasurer, and Charles E. Cooke, secretary. The Champlain Spinners, Inc., has a capitalization of $75,000.

It is said that the company has purchased from a European inventor exclusive rights for machinery designed for preparing long staple fiber.

Mohair-Covered Bridge Table A "New Use"

Mohair velvet, already a versatile textile, has been called to a new service as an aid to bridge and other card players. The material is used as the table top covering of a popular make of folding table and is winning approval because of the suitability of its surface. Cards are easy to pick up without bending, whether new or old.

Shortens Company Name

Utica (N. Y.) Steam & Mohawk Valley Cotton Mills, have arranged for change of company name to the Utica & Mohawk Cotton Mills, Inc.

January Wool Consumption, Loom Operation Increase

Wool machinery statistics for January, as revealed in a survey conducted by the Department of Commerce, indicate increased operation of wide looms and decreased operation of narrow looms since December. Active machine hours for looms wider than 50-inch reed space totaled 51% of the single shift capacity compared with 44.2% in the preceding month, and 48.6% in January, 1931, while machine hour activity for looms of 50-inch reed space or less, aggregated 24.6% in January, 1932, against 25.7% in December, and 27.7% in January, 1931. Woolen spindle activity, single-shift, was 52.4% of capacity in January, 1932, against 39.4% in December, and 48.3% in January, 1931. Worsted spindle activity in January was 52.8%, in December, 49.2%; 52.1% Jan. 1931.

Simultaneously, the Department of Commerce announced January 1932 wool consumption figures, which indicated a rise of nearly 3,000,000 lb. grease equivalent over the preceding month. In January the quantity of wool entering manufacture totaled 34,252,515 lb. compared with 31,624,584 lb. in December.

Henry Lauten Addresses Lowell Textile Alumni

Cutting short a vacation in the South, Henry Lauten, chairman of the Textile Converters' Association, returned to New York last Tuesday in time to address the New York Section of the Lowell Textile Alumni at its dinner in the Happiness Restaurant, Fifth Ave. at 44th St. He is inclined to believe, he said, that the tariff is largely responsible for the difference between good times and bad, and that signing the present tariff bill was a serious mistake.

Mr. Lauten declared that a serious deficiency in the textile trade is the absence of any leader sufficiently strong to set prices at a profitable level. Nevertheless he sees encouraging signs in the growing capacity of the country to consume textiles, due to increasing birth rate and decreasing death rate, and in the shrinking capacity of the industry to produce. As evidence of the latter trend, he cited the discarding of 3,700,000 spindles by the cotton branch since 1924 and the extensive elimination of night work, although he admitted that these gains are somewhat mitigated by increasing productivity of the individual machines. He declared that no substantial improvement in business can be expected until more plants have gone beyond the possibility of quick rehabilitation. He criticized elimination of commodity freight rates by the Interstate Commerce Commission and declared that New England's arguments for preferentially lower rates from the West are fallacies.

The alumni meeting was arranged particularly as an "old timers' night," and at the head table were seated the following older men: F. C. Holden, '09; A. K. Gyzander, '09; H. B. Arundale, '07; E. C. Woodcock, '07; H. W. Cheney, '06; A. J. Hennigan, '06; and I. W. Barr, '00. In the election of officers A. J. Winkler was returned to the presidency; and H. R. Mauersberger, to the secretary-treasurership.

Business News

Riggs & Lombard Organized to Manufacture Textile Finishing Machines

Riggs & Lombard, a new concern with headquarters at Suffolk St., Lowell, Mass., has been organized for manufacturing and marketing a complete line of fulling machines, dye kettles, washers, rolls, reels, etc. H. C. Riggs was formerly with the Rodney Hunt Machine Co., Orange, Mass., for nine years as head of the Textile Department, and C. J. Lombard was his assistant for three years. Associated with Messrs. Riggs and Lombard in the new enterprise will be B. H. Locke for many years textile designer of the Rodney Hunt Machine Co. and several others of the latter organization. It is announced that the new concern has ample manufacturing and financial resources and that efforts will be concentrated on the production of new and improved designs of machinery.

Sells Machinery for General Silk Corp.

H. M. McCord, mill properties, New York, has been named as exclusive agent for the disposition of machinery purchased some time ago by the General Silk Corp., New York. The machinery involved, was used at the old plants of the Champlain Silk Mills, Whitehall and Glens Falls, N. Y., and a plant of the old Corticelli Silk Co., at Leeds, Mass.

Harold W. Horton to Deal in Machinery and Engineering

Harold W. Horton, previously with the Woonsocket Machine & Press Co., has opened an office at 49 Westminster St., Providence, R. I., to handle new and used textile machinery. Mr. Horton will also specialize in mill surveys, appraisals, etc.

Open Office in Tulsa

The Neilan Co., Ltd. (Division of Mason Co.) and the Mason Regulator Co. announce the establishment of their own joint office at 409 E. Archer Street, Tulsa, Okla. Gordon Thomason will be in charge.

Alfred Wolstenholme & Son Machinery Being Sold

The machinery and equipment of the plant of Alfred Wolstenholme & Son, Inc., 24th St. and Allegheny Ave., Philadelphia, worsted yarn spinners, is being sold by this company through H. Edward Jefferson, 560 So. Delaware Ave., Phila.

Dr. C. P. Harris in New Location

Dr. Clarence P. Harris, industrial chemist, formerly located at 522 Fifth Ave., has removed his office and established a newly equipped laboratory at 174 Madison Ave., New York.

Hemphill Changes Philadelphia Address

The Philadelphia address of the Hemphill Co., knitting machine manufacturers, has been changed to 6822 North Gratz St. George McDowell is the local manager.

QUOTATIONS

at close of business, March 9, 1932
Prices cover average qualities unless otherwise stated

Cotton Goods

	Mar. 9	Mar. 3	Mar. 11 1931
PRINT CLOTHS			
27 -in., 64x60, 7.60	2⅛c.	2⅛c.	3⅛-4c.
38½-in., 64x60, 5.35	3¼c.	3¼-4c.	5½-5⅝c.
39 -in., 68x72, 4.75	4¼-4⅜c.	4¼-4⅜c.	6½-6⅝c.
39 -in., 72x76, 4.25	5⅛c.	5⅛	7⅛-7⅛c.
39 -in., 80x80, 4.00	5¼-5⅜c.	5¼-5⅜c.	7⅛-7⅜c.
BROWN SHEETINGS			
36-in., 56x60, 4.00	4¼-4⅜c.	4¼-4⅜c.	5⅜c.
36-in., 48x48, 3.00	4⅜c.	4⅜c.	6⅛c.
37-in., 48x48, 4.00	4⅛c.	4⅛c.	5½-5⅝c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70	4¼-4⅜c.	4⅛c.	6⅛c.
36 -in., 64x60, 5.75	4-4⅛c.	4-4⅛c.	5⅜c.
MISCELLANEOUS			
Drills, 37-in., 3 yd.	4⅛c.	4⅛c.	6⅛c.
Denims, 2.20	9¼c.	9¼c.	12 c.
Tickings, 8 oz.	12 c.	12 c.	15½c.
Standard prints	6¼c.	6¼c.	7⅛c.
Eastern staple ginghams, 27-in.	6 c.	6 c.	8 c.

Cotton Waste

Peeler comber	6 - 6¼
Peeler strips	5 - 5½
Sak. comber	4½ - 5
Choice willowed fly	2½ - 3¼
Choice willowed picker	2 - 3
Sak strips	6½ - 7½
Linters (mill run	2 - 2½
White spooler (single)	4¼ - 4½

Cotton Yarn

CARDED (Average Quality)
Double Carded 2c.—4c., higher according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.12½	22s	$0.16
10s	- .13	24s	- .17
12s	- .13½	26s	- .18
16s	- .14½	30s	- .19
20s	- .15	40s ex. qual.	- .27

TWO-PLY SKEINS AND TUBES

8s-2	$0.13	26s-2	$0.18- .18½
10s-2	- .13½	30s-2	19½- .20
12s-2	- .14	36s-2	- .25
14s-2	- .14½	40s-2	- .26
16s-2	- .15	40s-hi.brk.	- .28
20s-2	15½- .16	50s-2	- .33
24s-2	17 - .17½	60s-2	- .36

SINGLE WARPS

10s	$0.13	24s	$0.17
12s	- .13½	26s	- .18
14s	- .13½	30s	- .19½
16s	- .14½	40s. ex.qual.	- .28
20s	- .15½		

TWO-PLY WARPS

8s-2	$0.13	24s-2	$0.17½-0.18
10s-2	.13½	26s-2	.18½- .19
12s-2	.14	30s-2	.19½- .20
14s-2	.14½	40s-2 ordin.	- .26
16s-2	.15	50s-2	- .33
20s-2	.15½- .16	60s-2	- .36

8s-3 and 4-ply skeins and tubes; tinged, 11½; white, 12½; waste, 11

HOSIERY CONES (Frame Spun)

8s	$0.12½	22s	$0.16 -0.16½
10s	- .13	24s	- .17
12s	- .13½	26s	- .18
14s	- .14	30s tying	18½- .19
16s	- .14½	30s reg.	19½- .20
18s	- .15	30s ex.qual.	20½- .21
20s	15½- .16	40s	- .26

COMBED PEELER (Average Quality)

TWO-PLY—(Knitting Twist) Cones

20s-2	$0.25	60s-2	$0.39 - .40
30s-2	.27 - .28	70s-2	.50 - .52
36s-2	.29 - .30	80s-2	.60 - .63
40s-2	.30 - .31	90s-2	.85 - .87
50s-2	.33 - .35	100s-2	.98 -1.05

WARPS, SKEINS AND CONES
TWO-PLY—(Warp Twist)

20s-2	$0.25	60s-2	$0.40 -0.41
30s-2	.28 - .29	70s-2	.50 - .52
36s-2	.30 - .31	80s-2	.60 - .62
40s-2	.31 - .32	90s-2	.85 - .90
50s-2	.35 - .36	100s-2	.95 -1.02

SINGLES

12s	$0.18½-0.19½	30s	$0.26 -0.27
14s	19 - .20	38s	.28½ - .29
16s	.19½ - .20½	40s	.29 - .30
18s	.20 - .21	50s	.33 - .34
20s	.21 - .22	60s	.40 - .42
24s	.23 - .24	70s	.51 - .53
28s	.25 - .26	80s	.60 - .63

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.42 -0.44	90s-2	$0.95
30s-2	.43 - .45	100s-2	1.20-1.25
36s-2	.45	120s-2	1.55-1.60
40s-2	.47	30s	.49- .51
45s-2	.48	40s	.54- .56
50s-2	.50 - .52	50s	.60- .62
60s-2	.55 - .57	60s	.65- .68
70s-2	.69	70s	.77- .80
80s-2	.79	80s	.92- .96

Cotton Prices and Statistics

COTTON STATISTICAL DATA

Fluctuations of Futures)

	Closed Mar. 3	For Week—High	For Week—Low	Closed Mar. 9	Net Ch'ge
March	6.95	7.06	6.90	7.42	+.47
April	7.00	7.04	6.88	7.49	+.49
May	7.07	7.19	7.00	7.55	+.42
June	7.14	7.18	7.19	7.64	+.50
July	7.23	7.35	7.17	6.90	—.33
August	7.30	7.35	7.25	6.96	—.36
September	7.37	7.42	7.32	7.03	—.34
October	7.44	7.55	7.37	7.10	—.34
November	7.52	7.59	7.48	7.19	—.33
December	7.61	7.71	7.55	7.29	—.32
January	7.70	7.78	7.62	7.35	—.35
February	....	....	....	....	....

SPOT FLUCTUATIONS FOR WEEK

(Middling)

	New York	New Orleans	Liverpool
Thursday, March 3	7.10	6.95	5.81
Friday, March 4	7.15	7.00	5.73
Saturday, March 5	7.15	7.00	5.62
Monday, March 7	7.10	6.93	5.59
Tuesday, March 8	7.05	6.93	5.48
Wednesday, March 9	7.05	6.97	5.31

FOREIGN COTTONS

Egyptian Cotton

Alexandria Exchange, Mar. 8.		Change
Mar. Sak	13.14	—0.78
Apr. Uppers	10.97	—0.86
Mar.-Apr. Shipment c. i. f. Boston (Tariff not included)		
Fully good fair Sak (No. 38)		13.00
Fully good fair to good Uppers (No. 10)		11.25

(By Anderson, Clayton & Co.)

Foreign cottons F. O. B. New York, Cents	
Peruvian Tanguis Strict Middling	16½
Peruvian Pima No. 1	16
Peruvian Moderate Rough	11
Peruvian Full Rough	17
China Tientsin No. 1	9¼
India Rough	7 to 10
India Smooth	6½ to 7½

(By Bruns-Nordeman Co.)

MOVEMENT INTO SIGHT

	This Year	Last Year
Week	230,000	172,000
Season	12,808,000	11,698,000

22,000 deducted.

WORLD VISIBLE SUPPLY

	Mar. 4	One Year Ago
Interior towns and ports of U.S.*	6,644,000	5,390,000
Afloat to and at ports of Europe	1,541,000	1,900,000
Afloat to and at ports of Orient	1,122,000	409,000
Total	9,307,000	7,699,000
Change during week	Decrease 36,000	Decrease 50,000

*Includes afloat to New York.

FORWARDINGS TO MILLS OF WORLD

	This Year—Week	This Year—Season	Last Year—Week	Last Year—Season
No. States, U.S.	17,000	551,000	22,000	580,000
So. States, U.S.	72,000	3,124,000	83,000	2,713,000
Total U.S.	89,000	3,675,000	105,000	3,293,000
Great Britain	33,000	775,000	20,000	557,000
Continent	57,000	2,142,000	69,000	2,227,000
Orient	84,000	1,956,000	21,000	810,000
Canada and other America	3,000	120,000	7,000	149,000
Total Foreign Countries	177,000	4,993,000	117,000	3,743,000
World total	266,000	8,668,000	222,000	7,036,000

22,000 deducted United States

EXPORTS FROM UNITED STATES

Total	274,000	6,025,000	190,000	5,078,000

AVERAGE PRICE MAR.-APR., SHIPMENT
HARD WESTERN COTTON
F.o.b. New England

	Middling	St. Middling
1 1/16-in	9- 9¼c.	9½- 9¾c.
1⅛-in	9½- 9¾c.	10 -10¼c.
1 3/16-in	10¼-10¾c.	11c -11¼c.
1¼-in	12½-13½c.	13½-14½c.

Basis on New York, March, 7.02.

SPOT FLUCTUATIONS AND STOCKS

Markets	Mar. 2	Mar. 9	Sales	This Week	Last Year
Galveston	Holiday	7.00	3,912	876,960	601,374
New Orleans	7.02	6.97	14,492	1,123,147	800,572
Mobile	6.70	6.65	9,154	218,996	241,195
Savannah	7.04	6.93	2,685	276,133	364,858
Norfolk	7.07	6.96	859	66,684	88,548
New York	7.20	7.05	4,123	208,164	229,274
Augusta	7.06	6.88	2,484	131,246	106,955
Memphis	6.35	6.30	42,333	446,394	309,897
St. Louis	6.50	6.65	....	....	12,643
Houston	Holiday	6.95	15,880	1,532,374	1,302,222
Dallas	Holiday	6.55	25,862	29,739	16,695

DIFFERENCES ON AND OFF MIDDLING
WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M.F	0.50†	.75†	0.65†	0.63†	0.65†
S.G.M.	.40†	.50†	.55†	.56†	.51†
G.M.	.30†	.40†	.40†	.38†	.37†
S.M.	.20†	.25†	.25†	.19†	.23†
S.L.M.	.20*	.20*	.25*	.19*	.23*
L.M.	.40*	.50*	.50*	.38*	.47*
S.G.O.**	.75*	.75*	.85*	.75*	.79*
G.O.	1.00*	1.00*	1.15*	1.13*	1.08*

YELLOW TINGED

G.M.	0.25*	0.25*	0.25*	0.25*	0.26*
S.M.	.35*	.40*	.35*	.38*	.38*
M.**	.50*	.50*	.50*	.50*	.51*
S.L.M.	.90*	.90*	.85*	.75*	.86*
L.M.	1.25*	1.25*	1.15*	1.13*	1.22*

YELLOW STAINED

G.M.	0.40*	0.65*	0.50*	0.38*	0.51*
S.M.**	.65*	1.05*	.85*	.75*	.87*
M.**	1.00*	1.15*	1.15*	1.13*	1.21*

BLUE STAINED

G.M.**	0.65*	0.60*	0.50*	0.50*	0.56*
S.M.**	1.00*	.80*	.85*	.88*	.89*
M.**	1.25*	.90*	1.15*	1.13*	1.17*

**Grades not deliverable on contract.
*Off Middling. †On Middling

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA (IN GREASE)

Fine delne	$0.23 –$0.23½	¾ blood	$0.23 –0.23½
Fine clthg	.20 – .21	¼ blood	.21 – .21½
½ blood	.23 – .23½		

TEXAS AND CALIFORNIA (CLEAN BASIS)

Texas, 12 months	$0.52 –0.54
California, Northern	.45 – .47

PULLED—EASTERN (CLEAN BASIS)

AA	$0.56 –$0.58	B-Super	$0.43 –0.45
A-Super	.48 – .50	C-Super	.38 – .42

MONTANA, IDAHO AND WYOMING (CLEAN BASIS)

Staple fine	$0.55 –0.57
Staple ½ bld	.52 – .54
Fine and fine medium	.51 – .53
⅜ blood	.47 – .49
½ blood	.40 – .42

MOHAIR—DOMESTIC

Best carding	$0.25 –0.28
Best combing	.32 – .35

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.17 –0.21
Cape firsts	.18 – .21

FOREIGN CLOTHING AND COMBING (CLEAN BASIS IN BOND)

Australia:	
70s	$0.38 –0.40
64s	.30 – .32
58s-60s	.28 – .30
(IN GREASE)	
Montevideo:	
58s-60s	$0.17 –0.18
56s	.16 – .17
50s	.15 – .16
Buenos Aires:	
4s, 40-44s	$0.10 –0.11
5s, 36-40s	.09 – .10

FOREIGN CARPET (GREASE BASIS IN BOND)

Aleppo washed	$0.19 –0.20
China: Combing No. 1	.12 – .13
China Filling Fleece	.11 – .12
Szechuen ass't	.12 – .13
Cordova	.09 – .10
Scotch black face (nominal)	.14 – .16
East India: Kandahar	.15 – .16
Vican'r	.19 – .20
Joria	.19 – .20

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s 36s	$0.70– .72½
2-24s 40s	– .80
2-26s 44s	80 – .82½
2-28s 46s	.85 – .87½
2-30s 48s	.90 – .92½
2-32s 50s	.92½– .95
2-30s 64s fancy mixes	1.20 –1.22½
(Single yarns 5c. less than above)	
2-36s 58s	1.05
2-40s, 60s	1.20
2-40s, 64s	1.22½–1.25
2-50s, 66s	1.30 –1.35
2-60s, 70s	1.65 –1.70

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.65
2-20s, 48s in oil	.70
2-20s, 50s in oil	.72½
2-20s, 56s in oil	.82½– .85
2-20s, 60s in oil	.95 – .97½
2-20s, 64s in oil	1.10 –1.12½
1-18s, 48s dyed	.85 – .87½
1-18s, 50s dyed	.90 – .92½
(Oil yarns 17½c. less)	

FRENCH SYSTEM

1-20s, 58s	.90 – .95
1-20s, 60s	1.02½–1.05
1-28s, 64s, dyed	1.25 –1.27½
1-26s, 64s	1.02½–1.05
1-30s, 66s, Warp	1.15 –1.17½
1-30s, 64s, Warp	1.10 –1.12½
2-30s, 64s, Fancy mixes	1.27½–1.30
2-40s, 64s, Zephyrs	1.25 –1.27½
1-50s, 66s	1.37½–1.40
2-50s, 66s	1.40 –1.42½
1-60s, 70s	1.55 –1.57½
2-60s, 70s	1.70 –1.72½

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	.90 – .92½
1-40s, 50-50-60s on cops	1.00 –1.02½
1-40s, 50-50-64s on cops	1.02½–1.05
1-40s, 50-50-64s Australian cops	1.10 –1.15

Underwear mixes, 3 to 5c., Solid color, 35c. additional.

New York Top Futures

	Closed Mar. 2	For Week—High	Low	Closed Mar. 8	Net Ch'ge
March	66.50	66.50	66.00	66.00	—0.50
April	67.00	67.00	66.50	66.50	—0.50
May	67.00	67.00	66.60	66.60	—0.40
June	67.00	67.50	67.00	67.00	.....
July	67.50	68.00	67.40	67.50	.....
August	67.50	68.00	67.50	67.50	.....
September	67.50	67.50	67.40	67.50	.....
October	68.00	68.40	67.60	68.00	.....
November	68.00	68.00	68.00	68.00	.....
December	68.00	68.00	68.00	68.00	.....
January	68.00	68.00	68.00	68.00	.....

Tops and Noils

TOPS —BOSTON

Fine (64-66s)	$0.77 –0.78
Half-blood (60-62s)	.71 – .73
High ¾ blood (58s)	.66 – .68
Aver. ¾ blood (56s)	.60 – .62
Low ¾ blood	.57 – .58
High ½ blood (50s)	.51 – .53
46s S. A. and N. Z	.55 – .57
44s S. A. and N. Z	.50 – .52
40s S. A. and N. Z	.46 – .48

TOPS — BRADFORD, ENG. (Mar. 4)

Fine (70s)	25 d	¾ bld. (56s)	17½d
Fine (64s)	22½d	½ bld. (50s)	12½d
½ bld. (60s)	22 d	Cross-bred (46s)	10 d

NOILS — BOSTON

Fine	$0.35 –$0.38	High ½ bld.	$0.26 –$0.28
Half-bld	.32 – .35	Low noils	.20 – .23
Aver. ¾ bld.	.28 – .30	Medium colored	.18 – 20
Fine colored	.23 – .28		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.60 – .62
Lap, fine colored	.40 – .43
Hard ends, fine white	.41 – .43
Hard ends, ¾ blood white	.28 – .31
Hard ends, fine colred	.18 – .20
Hard ends, medium colored	.13 – .15
Card, fine white	.23 – .25
Burr, fine carbonized	.24 – .26

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, coarse light	$0.04½–0.05
Merinos, fine dark	.02½– .03
Merinos, fine light	.09 – .10
Serges, blue	.04½– .05
Serges, black	.04½– .05½
Serges, red	.07½– .08
Knit, white	.22 – .23
Knit, red	.08 – .08½
Knit, light hoods	.08½– .09½
Worsted, light	.03½– .04
Worsted, blue	.05 – .05½
Worsted, black	.05½– .06

Silk Yarns

THROWN SILK (60 day basis) Prices Nominal

Japan organzine, 2 thd. spec. gd. XX sk 85%	$3.00
Japan organzine, 2 thd. grand sk. 83%	2.90
Japan organzine, 2 thd. sp. crack. sk. 81%	2.75
Japan crepe, 3 thd. gd. XX bob. 83%	2.70
Japan crepe, 3 thd. sp. crack. bob. 81%	2.55
Japan grenadine, 4 thd. sp. grand singles, 87%	3.85
Japan grenadine, 3 thd. 90%	4.85
Canton crepe, 3 and 4 thd. 14/16 on bobbins	2.30
Hosiery tram, 3 thd. Japan 90%	3 60
Hosiery tram 5 thd, Japan, 85%	2.70
Hosiery tram, crack XX 78%	2.35

SPUN SILK YARNS (Terms: net 30)

40/2	$3.10	60/2	$3.35
54/2	3.30	62/1	2.35

Raw Silk

(60 Day Terms. Spot Goods) Prices Nominal

	13/15 White	20/22 White	20/22 Yellow
Super Grand, 87%	$1.90	$1.95	$2.00
Special Grand, 85%	2.00	1.85	1.90
Grand XX, 83%	1.85	1.75	1.80
Special Crack, 81%	1.80	1.75	1.80
Crack XX, 78%	1.70	1.70	1.75
Extra Extra, 73%	1.65	....	....
Best Extra, 68%	1.55	....	....

Canton filature, new style, 14/16	$1.60
Canton filature, new style, 20/22	1.55
Tussah filature, 8 cocoon	1.95

NATIONAL RAW SILK EXCHANGE

	Close Mar. 2	For the Week High	Low	Close Mar. 8	Net Ch'ge
March	1.60	1.60	1.45	1.48	—0.12
April	1.59	1.59	1.45	1.48	—0.11
May	1.62	1.62	1.48	1.49	—0.13
June	1.64	1.64	1.50	1.51	—0.13
July	1.67	1.67	1.53	1.56	—0.11
August	1.67	1.67	1.55	1.56	—0.11
September	1.67	1.67	1.55	1.56	—0.11
October	1.67	1.67	1.55	1.56	—0.11

Total number of bales, 2,900. Total approximate value, $690,725. Trading unit crack XX 13/15 white 78%.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First	Second
30	8	$2.25	....
50	12–18	1.35	$1.25
75	18–30	1.20	1.10
100	18–40	1.00	.90
125	36–50	.90	.80
150	30	.72	.70
150	24–44	.75	.72
150	60	.85	.82
150	75–90	.85	.82
170	24–27	.75	.72
170	60	.85	.82
200	30–42	.75	.72
300	42–62	.63	.60
450	42–72	.63	.60
600	72–96	.63	.60
900	100–144	.63	.60

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
75	$1.35	$1.25	150	$0.75	$0 72
100	1.05	.95	175	.75	.72
125	.95	85			

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	24	$3.10	75	60	$1.30
25	24	2.85	80	60	1.30
30	24	2.60	100	75	1.10
40	30	1.70	120	90	1.00
52	30	1.50	150	112	.90
65	45	1.40	180	135	.87

ACETATE PROCESS

Denier	Price	Denier	Price
45	$1.60	125	$1.10
60	1.50	150	1.00
75	1.40	300	1.00
100	1.30		

Rayon Waste

Open bleached waste	$0.13–$0.14
Open bleached waste	.10½
Bleached thread waste (mfs.)	.09
Bleached thread waste (misc.)	.06– .07
Colored thread waste	.03– .04
Colored clips	.03– .04

CONVERTED RAYON WASTE

Bleached tops	$0.30–$0.32½
Unbleached tops	.27– .28
Bleached noils	.11
Unbleached noils	.09½
Bleached garnetts	.12
Unbleached garnetts	.13
Colored garnetts	.10– .11

Silk Waste

Kibizzo Kakai Grand XX	0.50
Kibizzo Kakai Triple Extra	.44
Frison Grand Double	.49
Pierced Cocoons	.50

CERTIFIED SAVINGS

SHOWING HOW MODERN PROCTOR DRYERS PAY

Surveys of typical installations of modern Proctor Dryers, by reputable investigating engineers, have made available performance data, cost analyses and detailed comparisons of these machines with other equipment . . . all based on facts as found, and certified correct by plant executives.

SAVING $11,664 A YEAR IN CLOTH CARBONIZING

Survey 693 shows a Proctor Continuous Cloth Carbonizing System, operated by one man, does more and better work than former tub, hydro-extractor and tenter dryer operated by three men. Output increased 90%, acid consumption greatly reduced, cost cut 79%, with improved quality of output. Saving of $11,664.00 a year at normal rate of output is more than doubled at full capacity rates.

PROCTOR TENTER HOUSING SAVES $3477.60 ANNUALLY

Survey 88 shows how a Proctor Tenter Housing and Air Circulation System installed on a Tenter for worsted goods, that previously was operated without complete air circulation, did away with former trouble from non-uniform drying, doubled the output, cut steam consumption 19.6%, reduced labor cost 47%. The saving of $3477.60 a year returns 84% on the investment in new machines.

DRYING COST CUT 53% FOR CARPET PADDING

Survey 683 shows how a Proctor Dryer of the type widely used for drying the backs of sized carpets and rugs, was installed for drying a hair felt used for padding under floor coverings, formerly dried over poles in rooms. The efficient continuous process of the new machine saves 33⅓% in labor and increased output nearly 100% without taxing capacity. Cost cut 53%, saving $4770.00 a year.

• We'll gladly send you the reports of these surveys or others on types of Proctor Dryers for your drying needs.

PROCTOR & SCHWARTZ, INC
PHILADELPHIA

With this machine

STOKES Rotary Cutter

Cuts tops, slivers, skeins or other continuous length forms of wool, silk, rayon, flax and cotton into any length up to 3 inches.

Makes 275 cuts per minute. Handles 4 to 8 strands of top or roving at one time.

Slightly modified models for lengths longer than 3 inches or for very short cuts (flock).

Write for quotation

FJS STOKES MACHINE COMPANY
5948 Tabor Road, Olney P. O., Philadelphia, Pa.

Your Cotton Production

Roy Improved Traverse Grinder

Roy Improved Roller Grinder

Much depends upon the start you give it. Roy Cotton Card Grinders will keep your cards in good condition continuously. Furnished singly or in sets of two Improved Traverse and one Improved Roller Grinder.

The investment is small; the return well worth-while.

B. S. Roy & Son Co.
Established 1868
Worcester, Mass.